

ENSAMBLES, EMPALMES y ACOPLAMIENTOS



ENSAMBLES : EN ANGULO

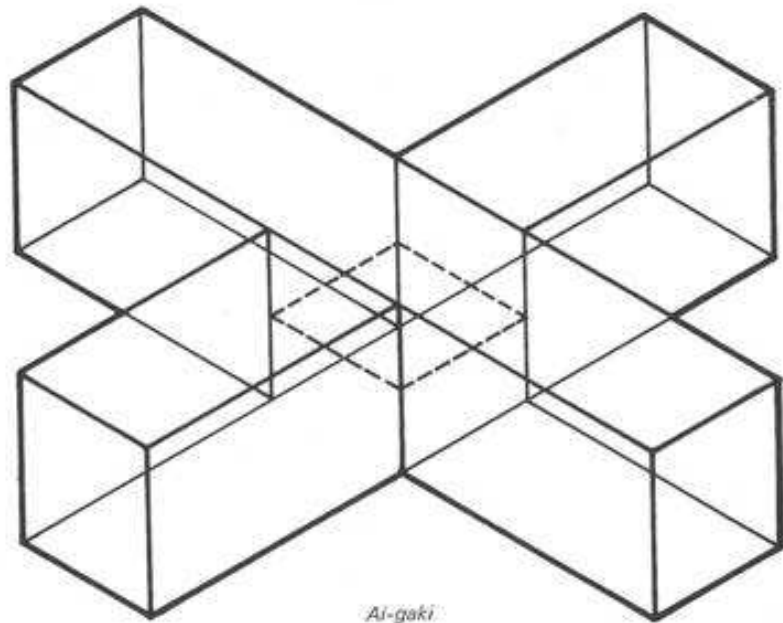
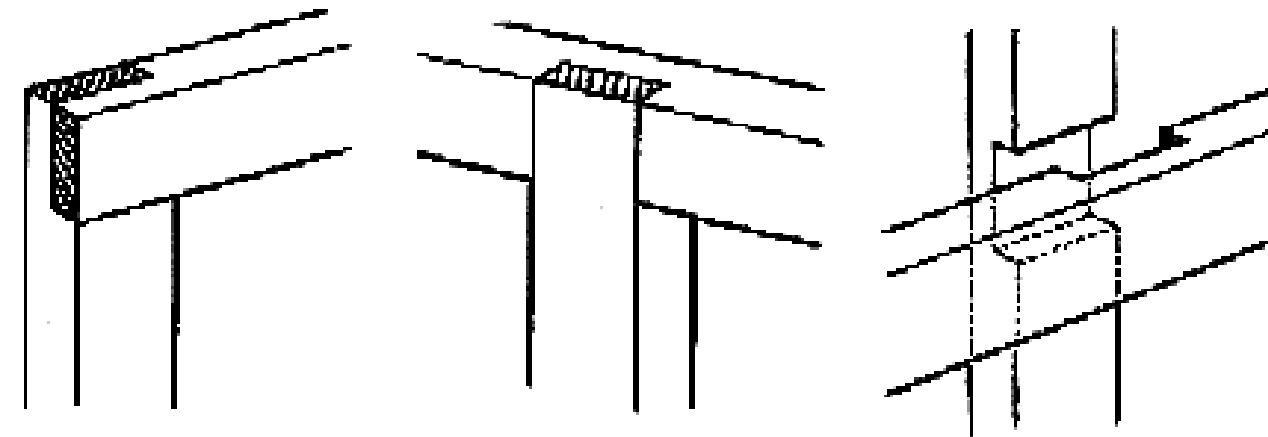
EMPALMES : LONGITUDINALES

ACOPLAMIENTOS : DE TESTA O CANTO

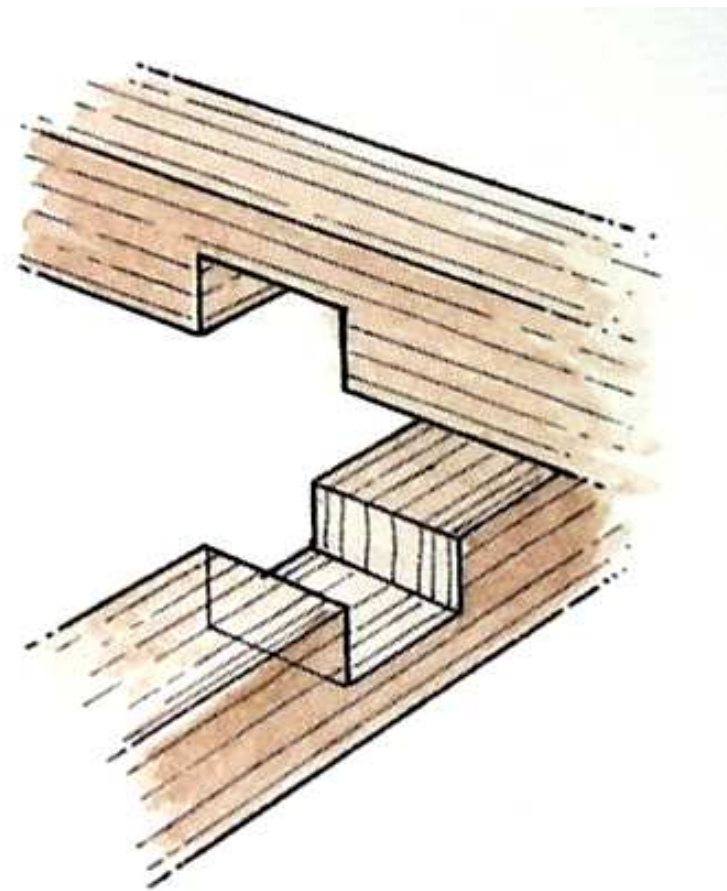
ENSAMBLES BASICOS

MEDIA MADERA
CAJA Y ESPIGA
COLA DE MILANO
A INGLETE
DE PALMA O ENTALLADURA
CON BARBILLA
DE CRUZ

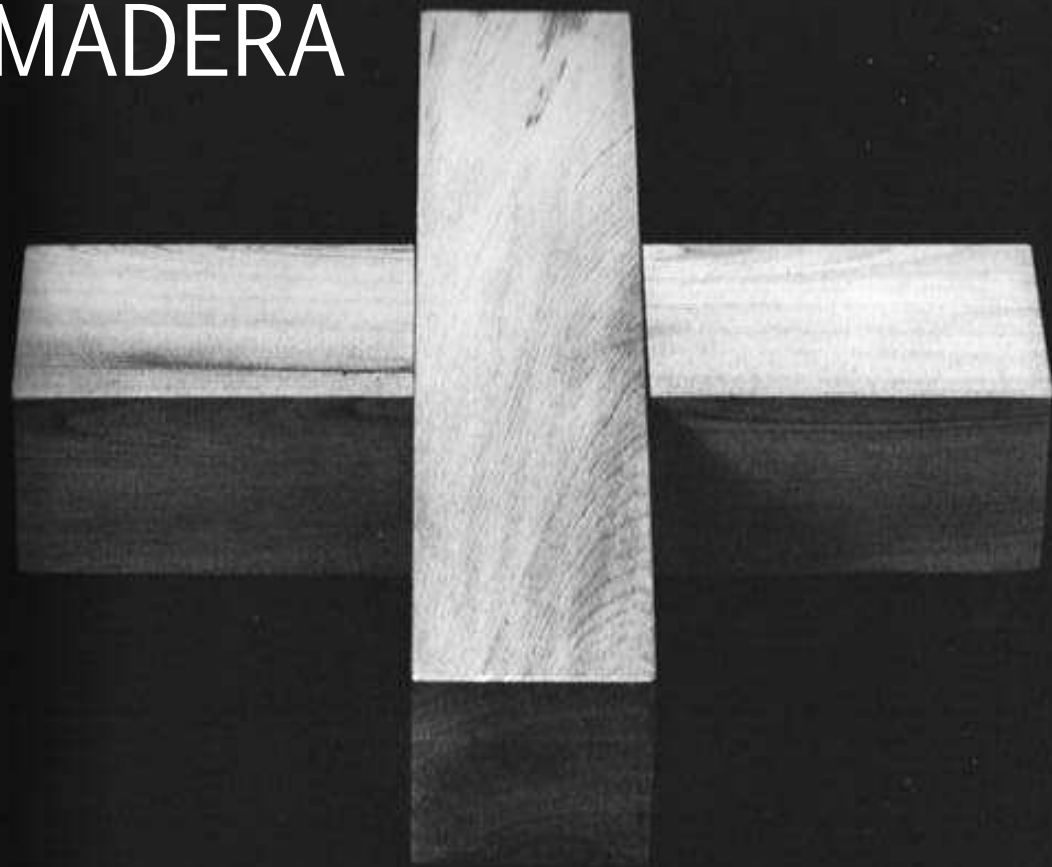
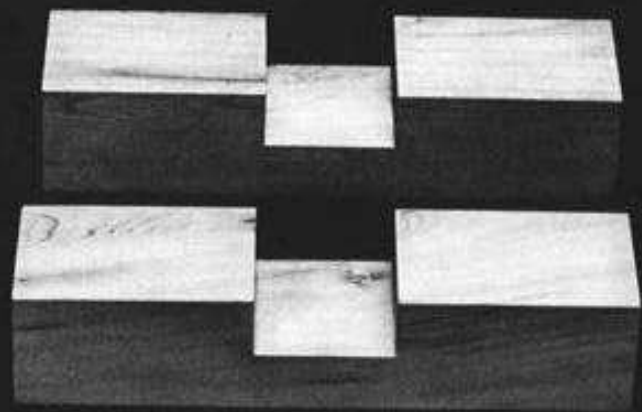
ENSAMBLES A MEDIA MADERA



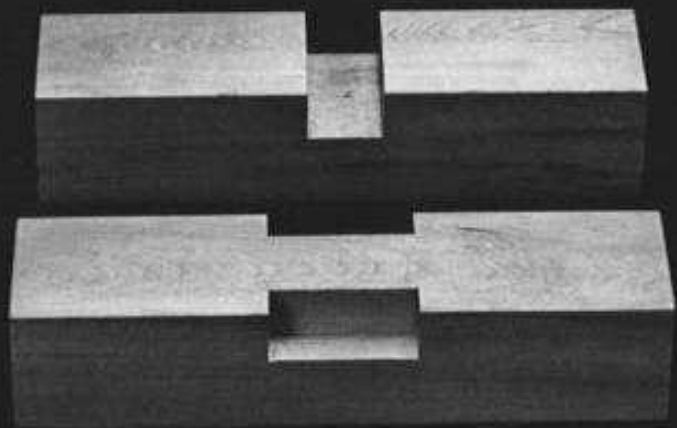
Ai-gaki



ENSAMBLES A MEDIA MADERA



ENSAMBLES A MEDIA MADERA CON HORQUILLA



ENSAMBLE CAJA Y ESPIGA

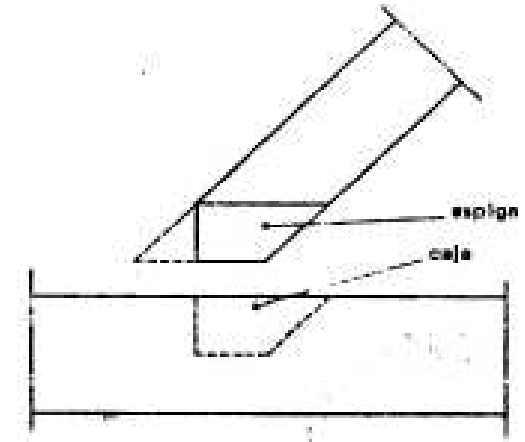
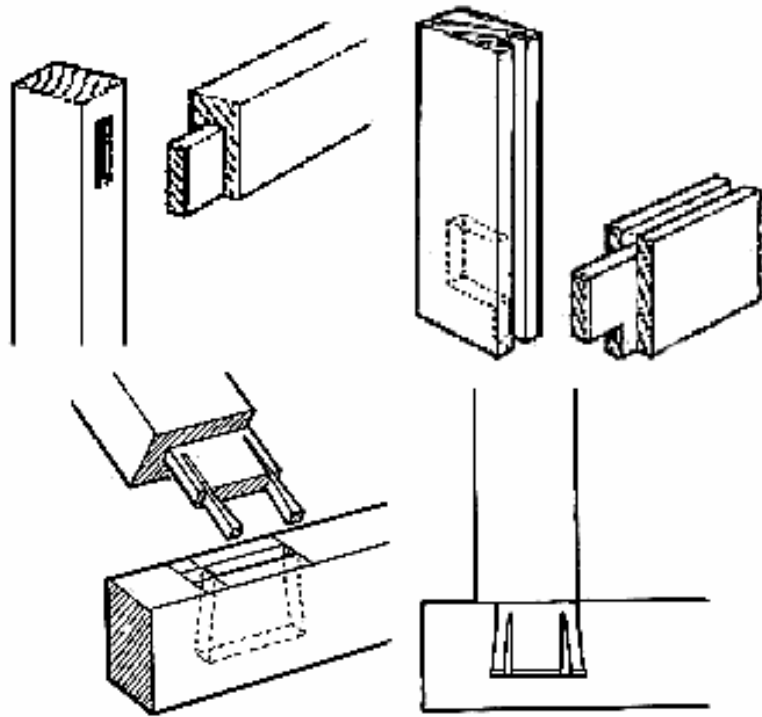
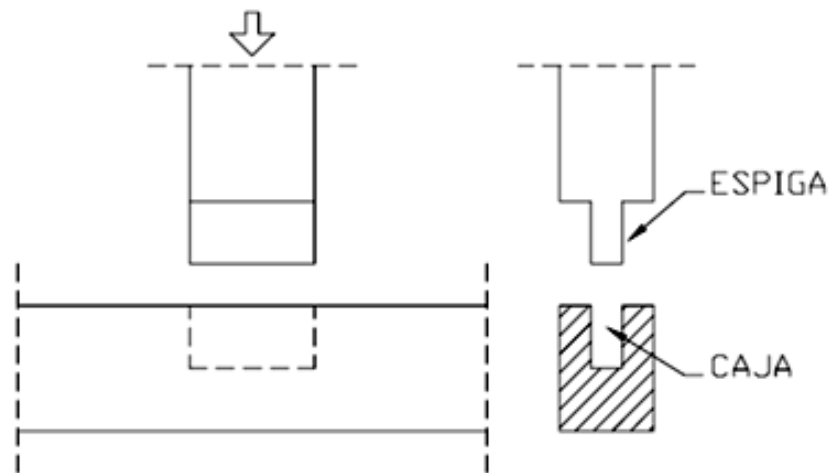
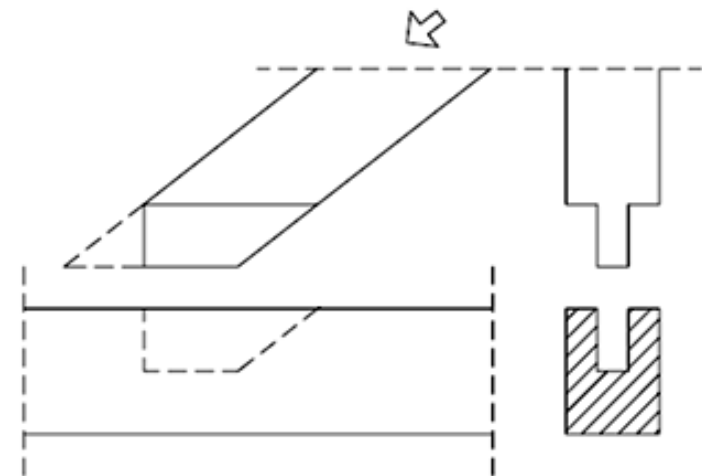


Fig. 5. — Ensamble oblicuo de caja y espiga.



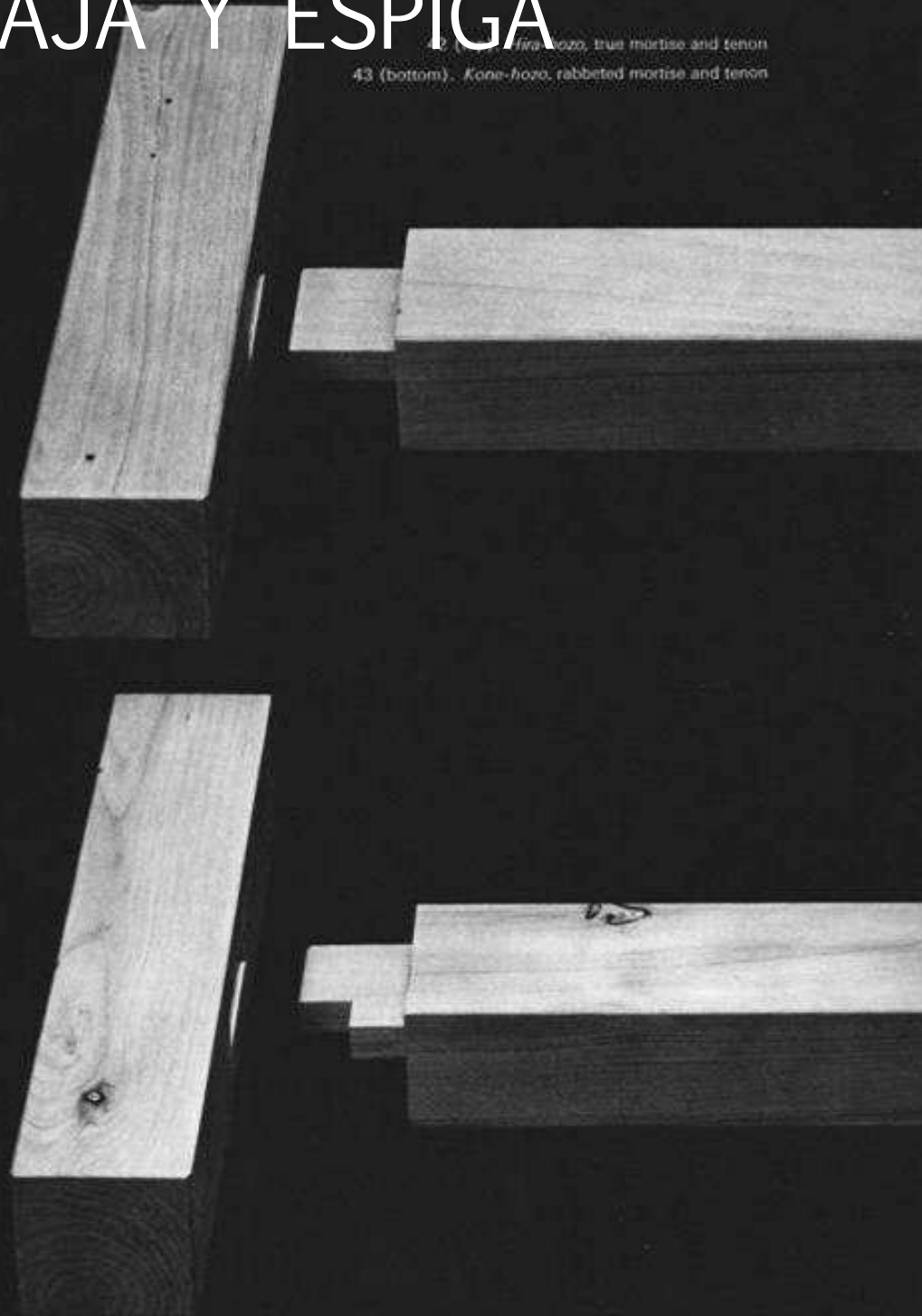
CAJA Y ESPIGA RECTO



CAJA Y ESPIGA OBLICUO

ENSAMBLE CAJA Y ESPIGA

42 (top). *Fits-kozo*, true mortise and tenon
43 (bottom). *Kone-kozo*, rabbeted mortise and tenon

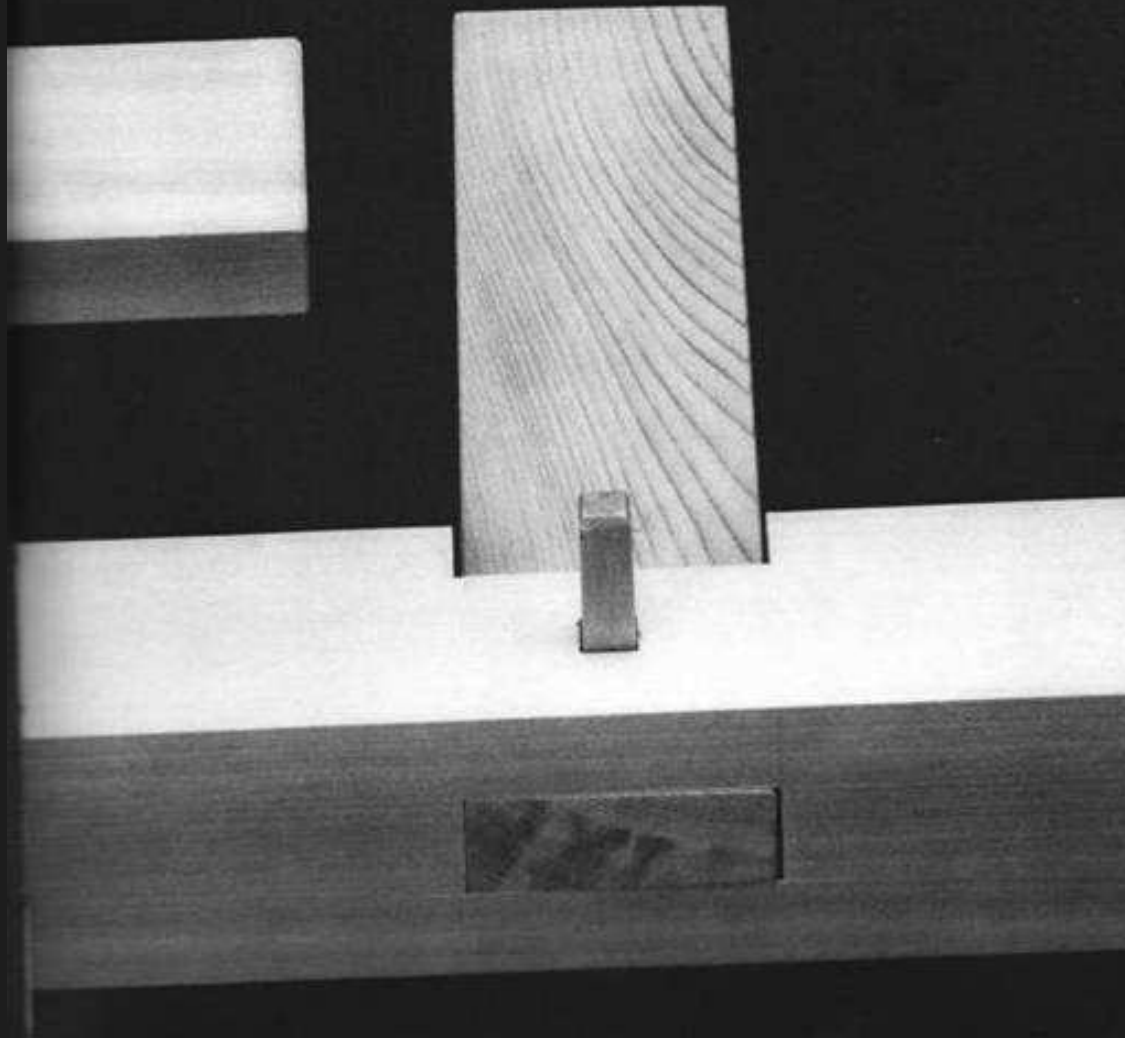


ENSAMBLE CAJA Y ESPIGA CON CLAVIJA

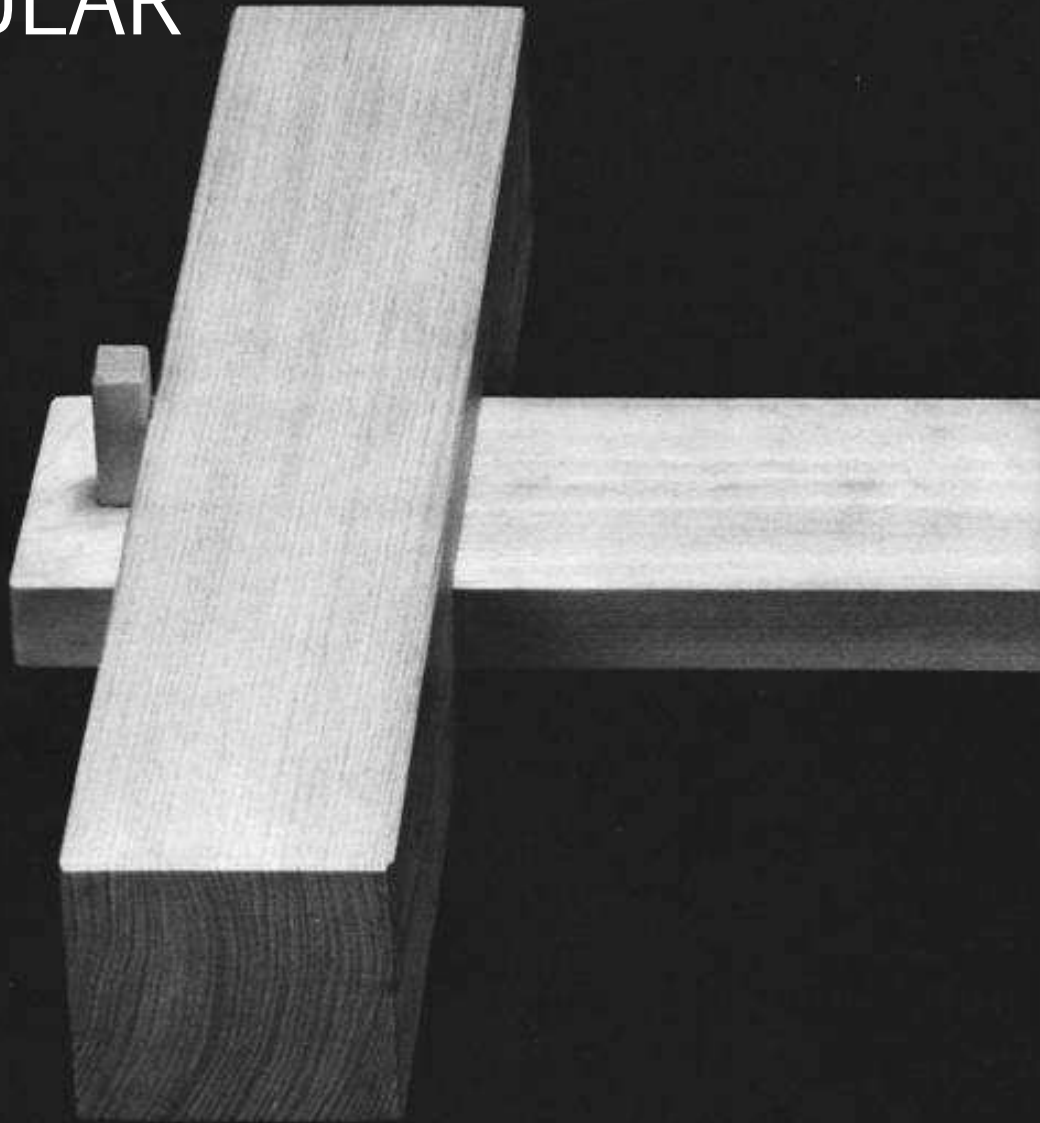


ENSAMBLE CAJA Y ESPIGA CON CLAVIJA

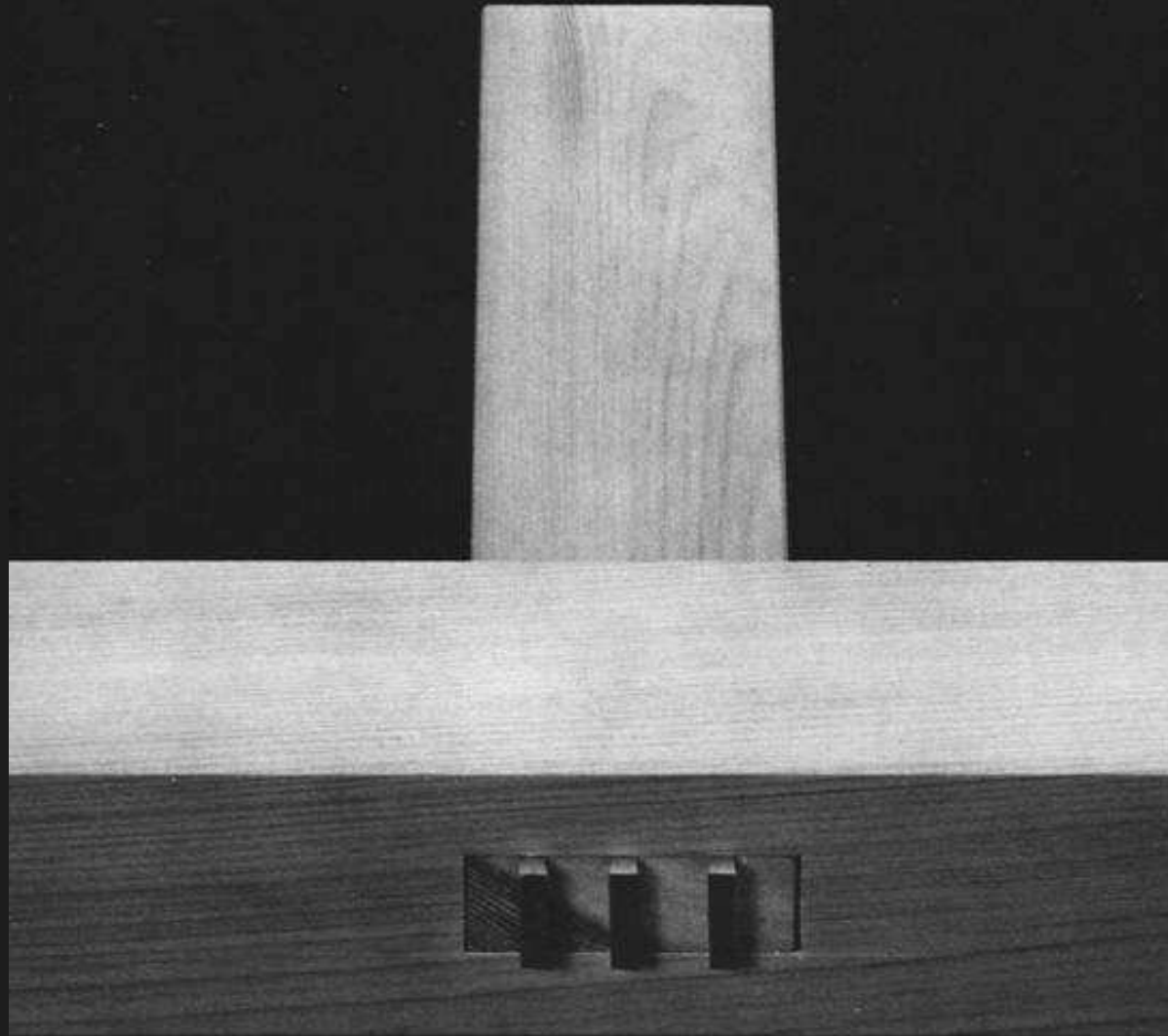
49. Komr-sen, draw pin joint



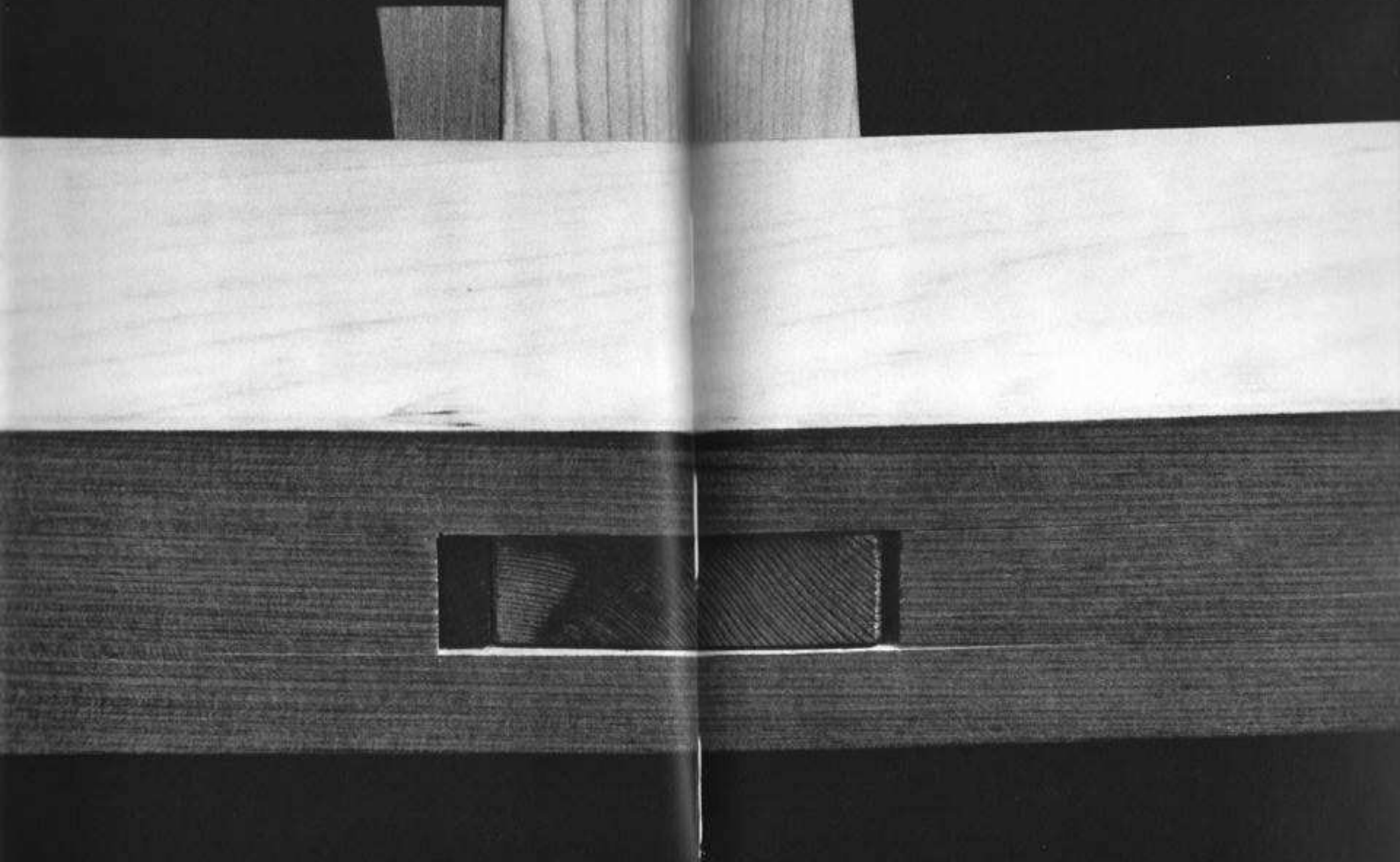
ENSAMBLE CAJA Y ESPIGA CON CUÑA PERPENDICULAR



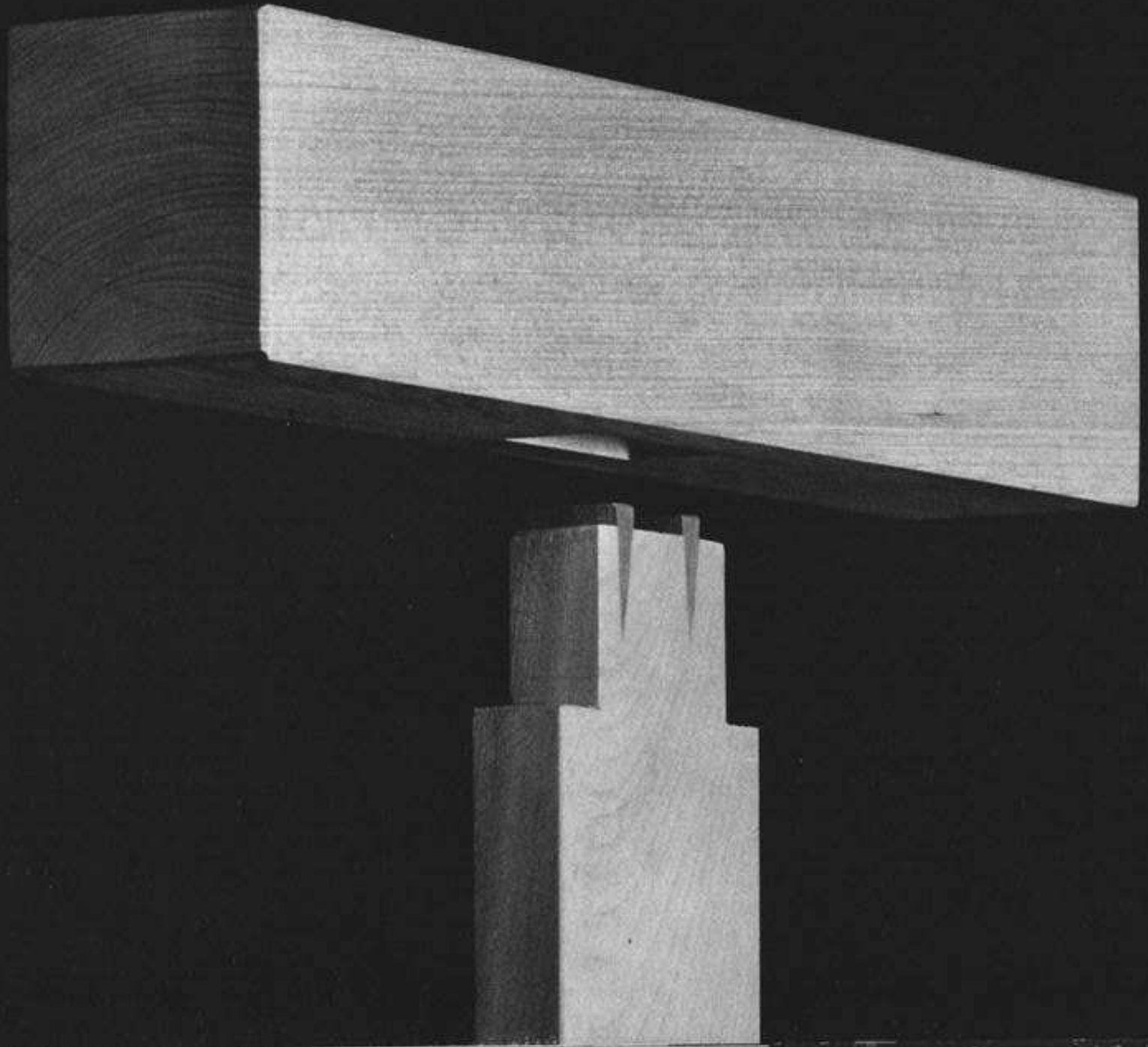
ENSAMBLE CAJA Y ESPIGA CON CUÑAS



ENSAMBLE CAJA Y ESPIGA CON CUÑA PARALELA

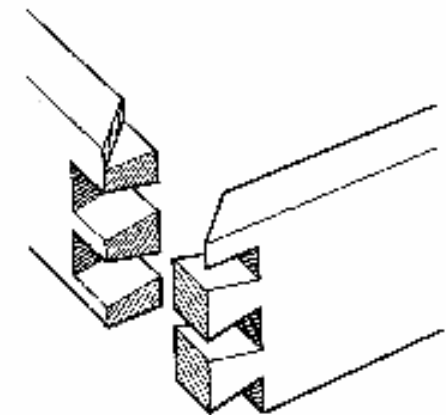
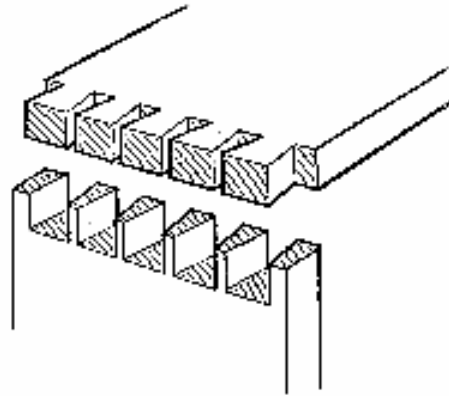
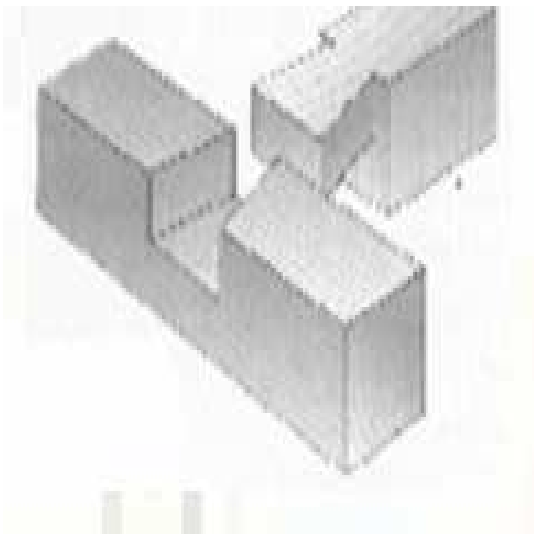
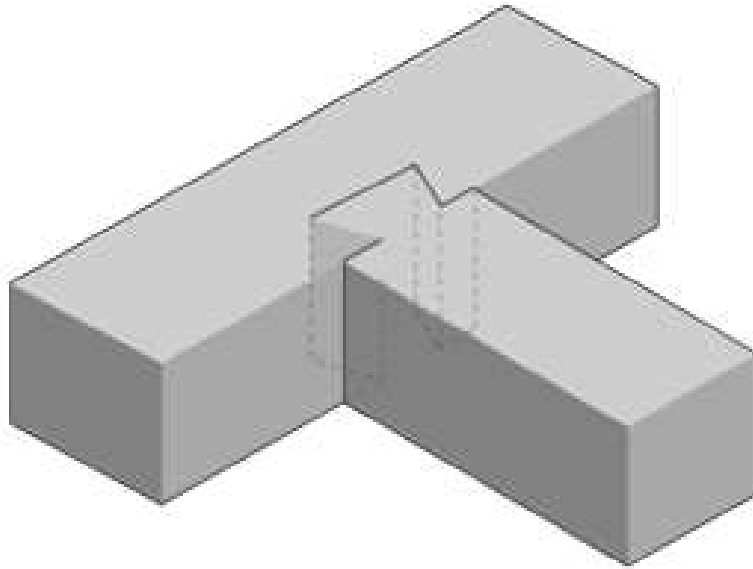


ENSAMBLE CAJA Y ESPIGA CON CUÑAS



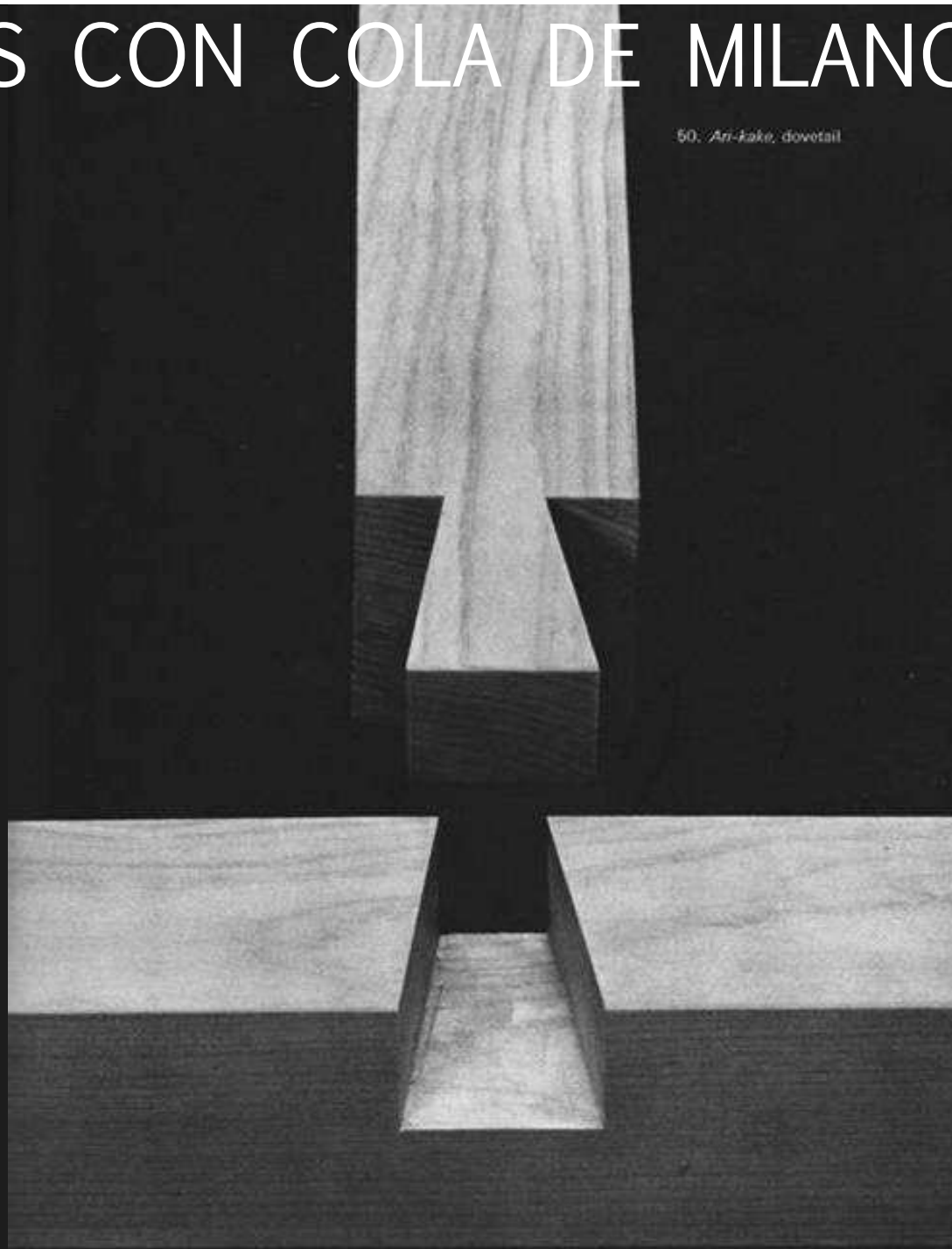
47. *Jigoku-kusabi*, wedged blind tenon

ENSAMBLES CON COLA DE MILANO

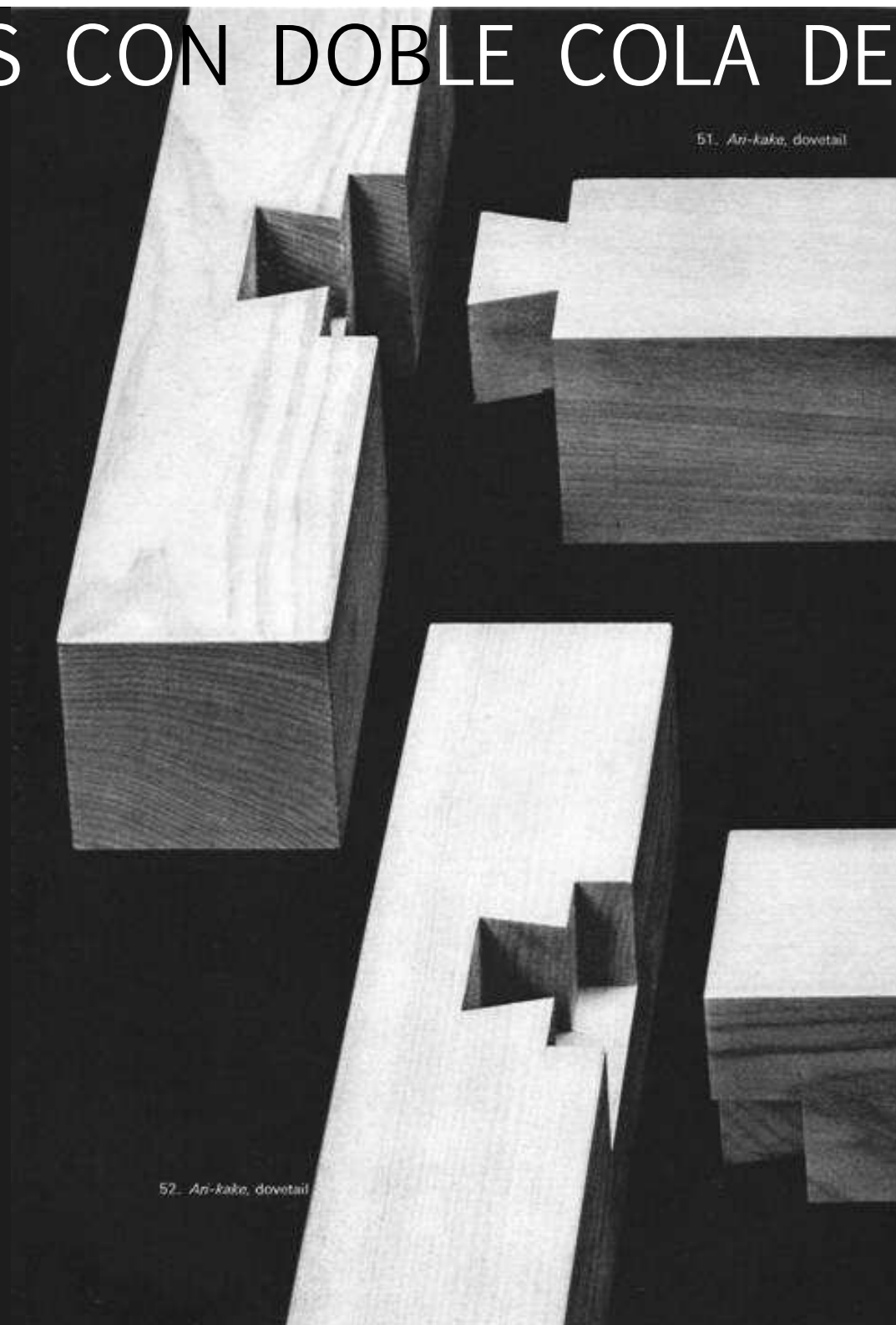


ENSAMBLES CON COLA DE MILANO

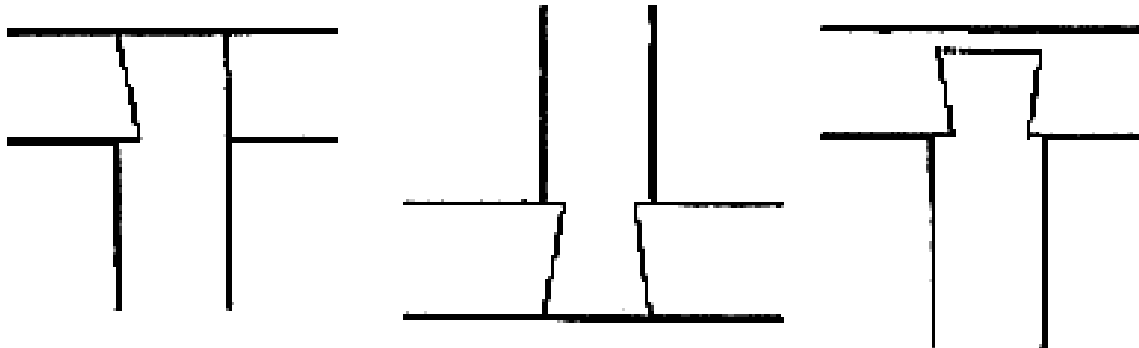
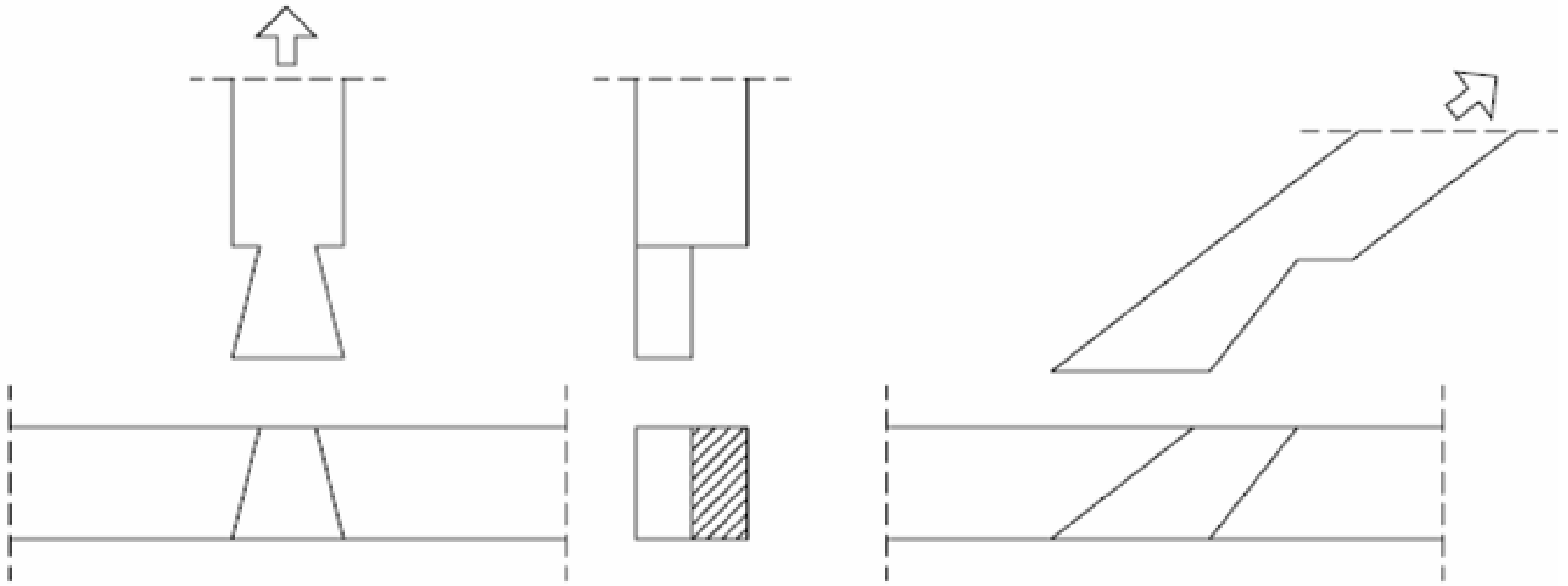
50. *Ari-kake*, dovetail



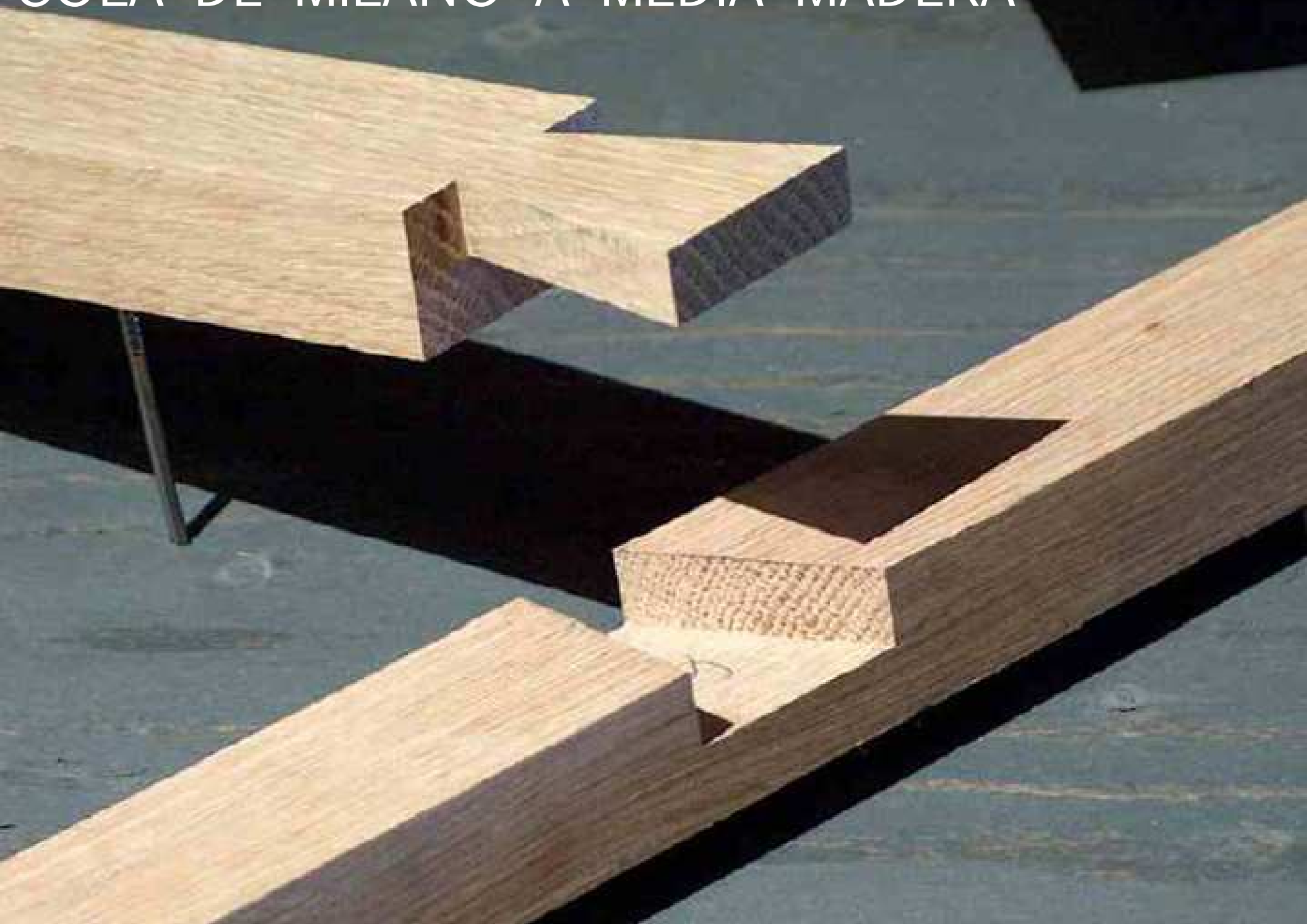
ENSAMBLES CON DOBLE COLA DE MILANO



ENSAMBLE COLA DE MILANO A MEDIA MADERA



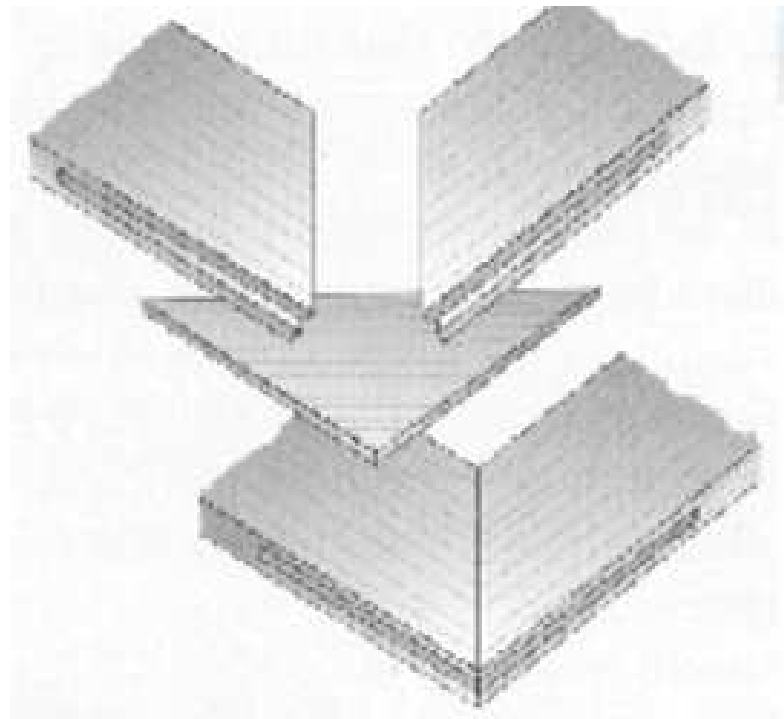
COLA DE MILANO A MEDIA MADERA



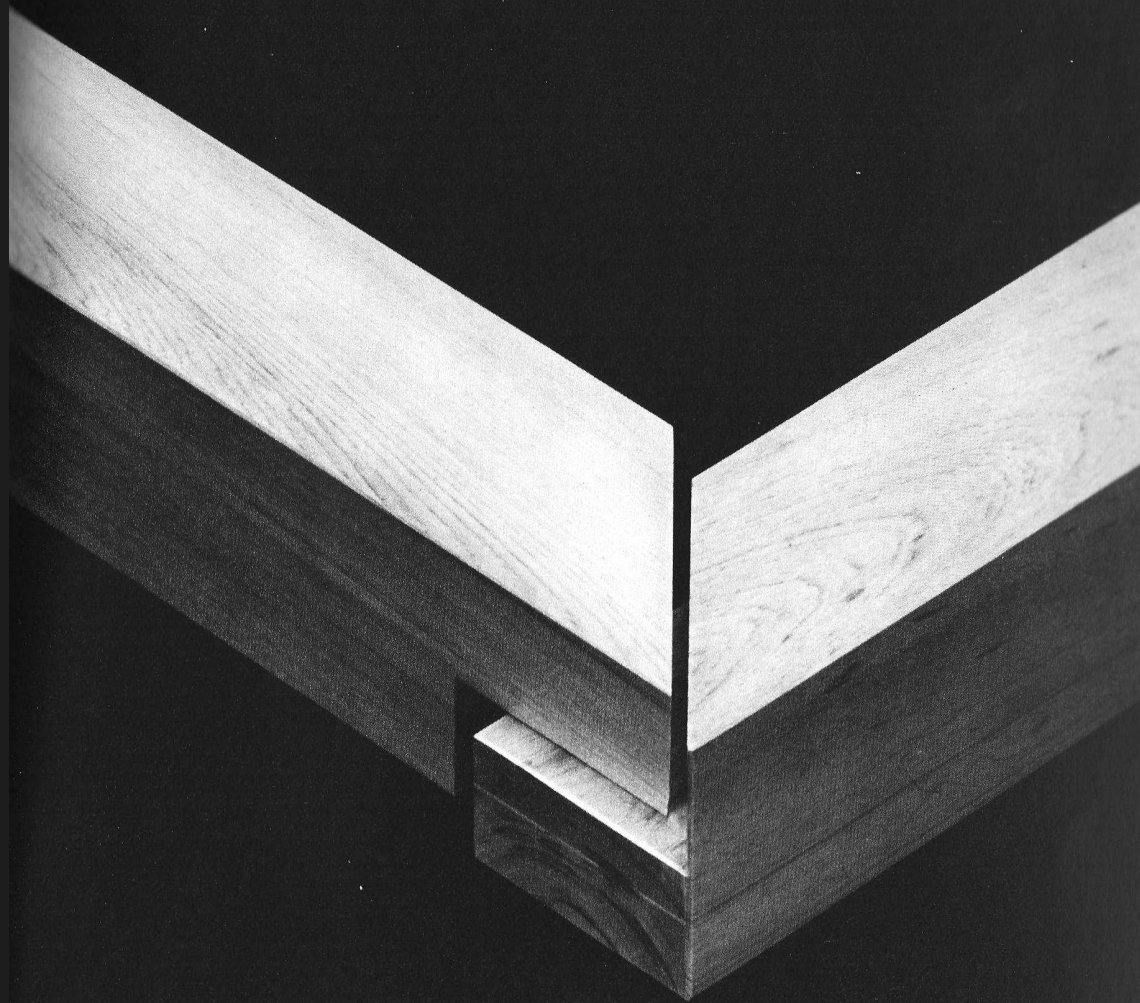
ENSAMBLE A INGLETE CON LLAVE



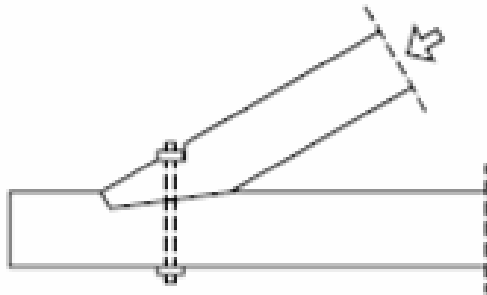
ENSAMBLE A INGLETE CON ESPIGA



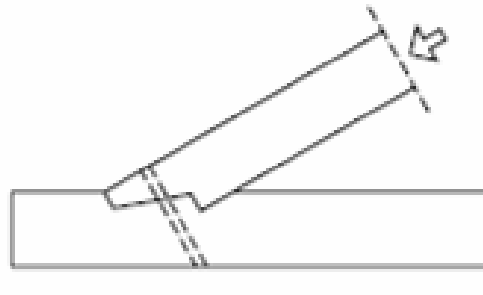
ENSAMBLE A INGLETE MEDIA MADERA



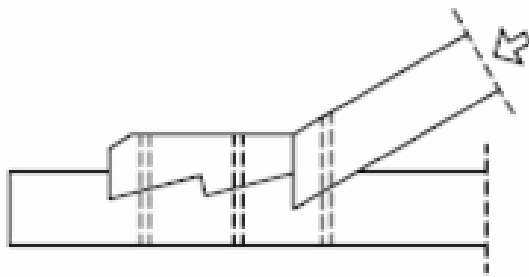
ENSAMBLES CON BARBILLA



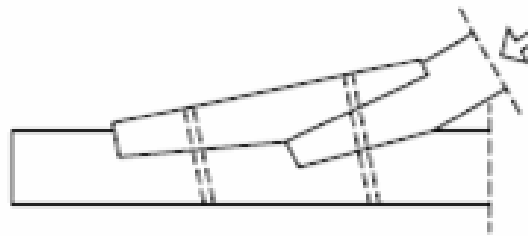
CON BARBILLA



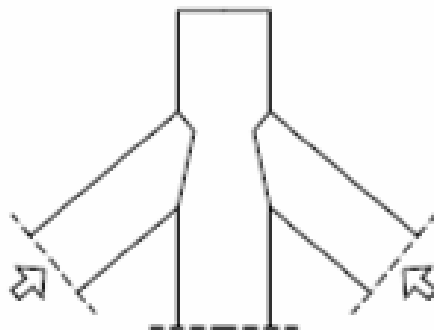
CON DOBLE BARBILLA



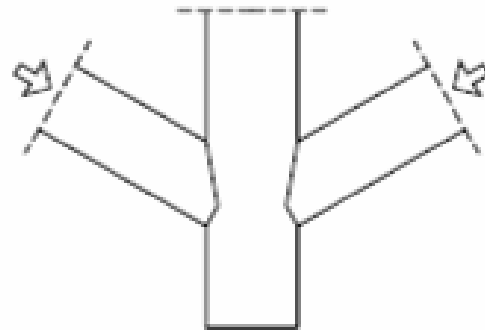
CON BARBILLA Y PIEZA
AUXILIAR



CON BARBILLA Y PIEZA
AUXILIAR OBLICUA



ENSAMBLE PENDOLON-PARES



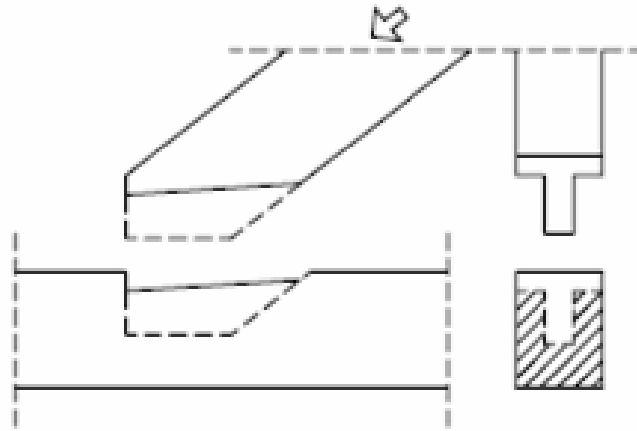
ENSAMBLE PENDOLON-TORNAPUNTAS

ENSAMBLES CON BARBILLA

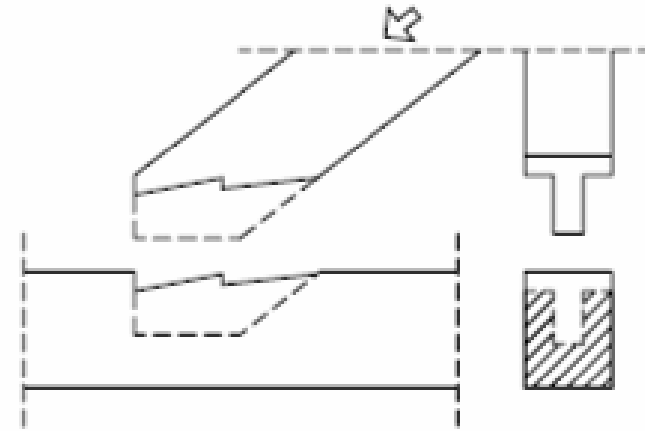


54. *Kashigi-bire*, notched mortise and tenon

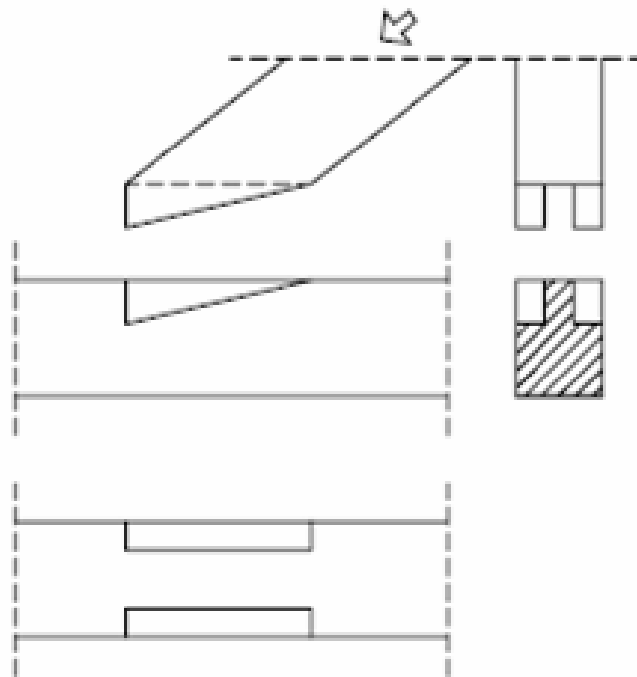
ENSAMBLE CON BARBILLA Y ESPIGA



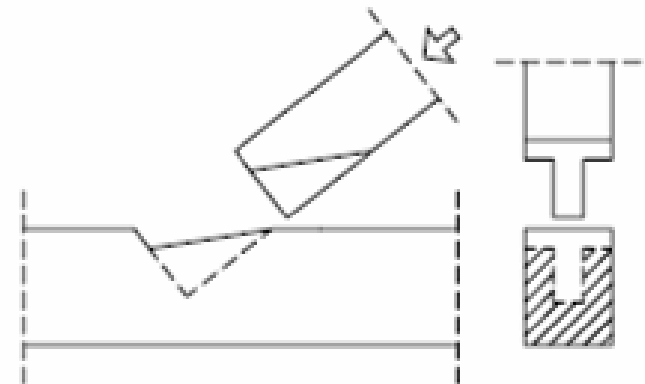
CAJA Y ESPIGA CON BARBILLA



CAJA Y ESPIGA CON DOBLE BARBILLA



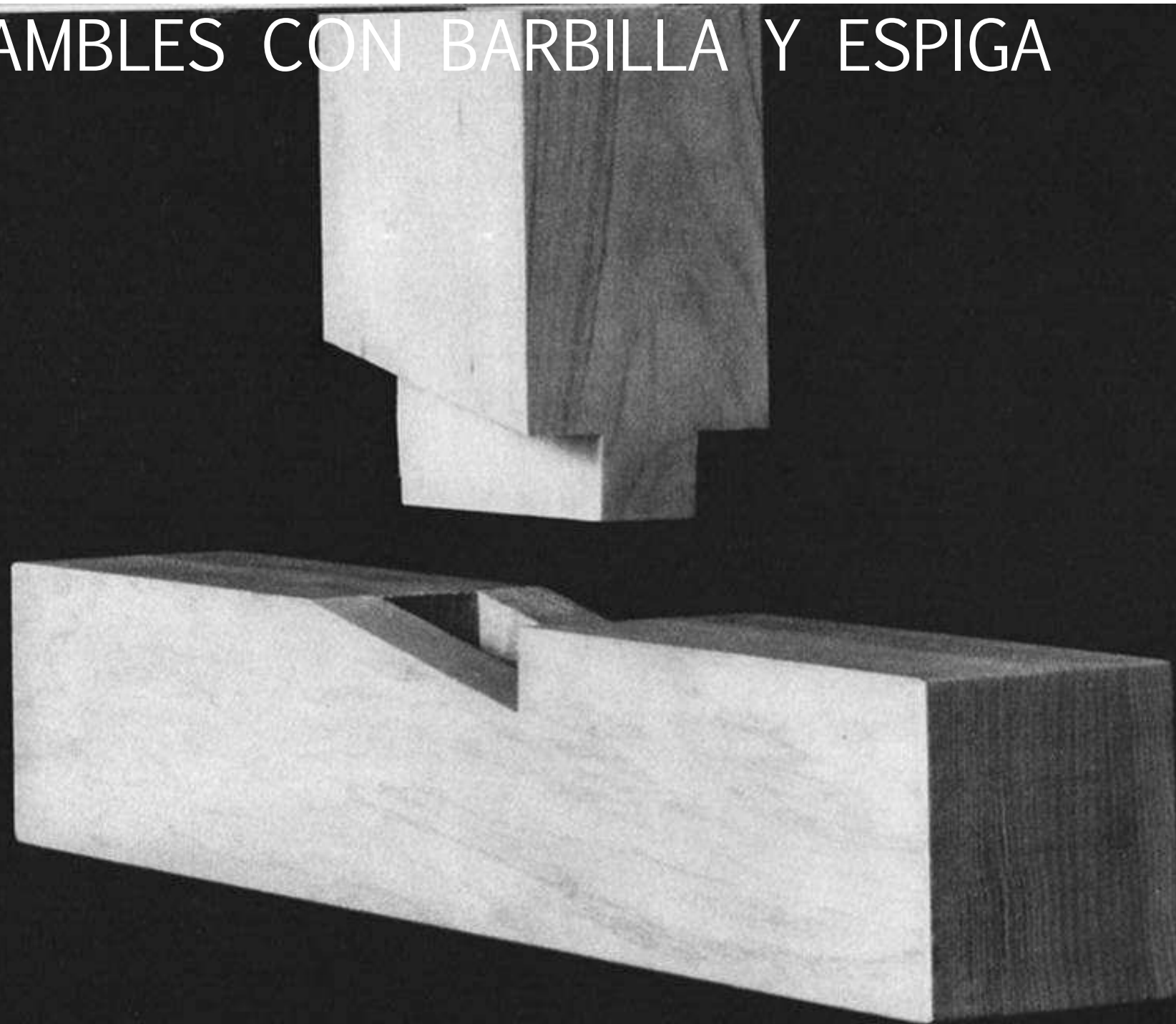
BARBILLA EN TENEDOR



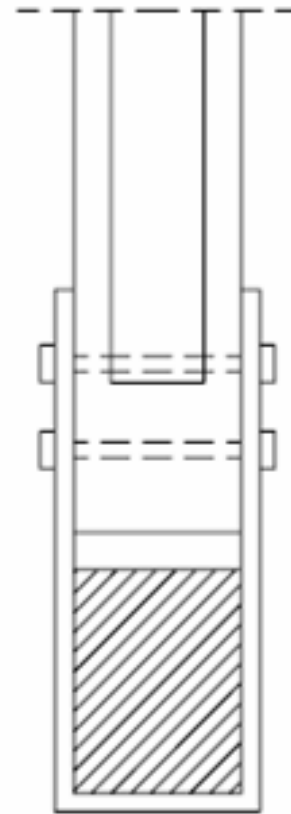
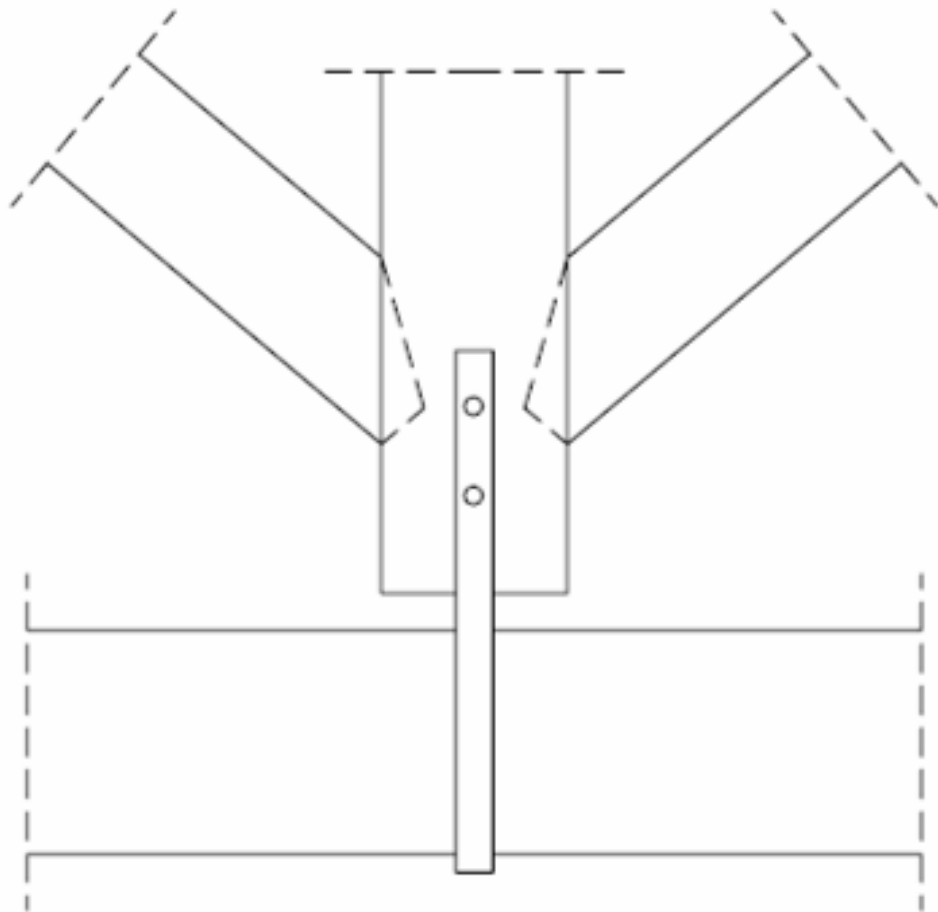
BARBILLA Y ESPIGA TRIANGULAR

ENSAMBLES CON BARBILLA Y ESPIGA

53. *Öire*. beveled shoulder mortise and tenon



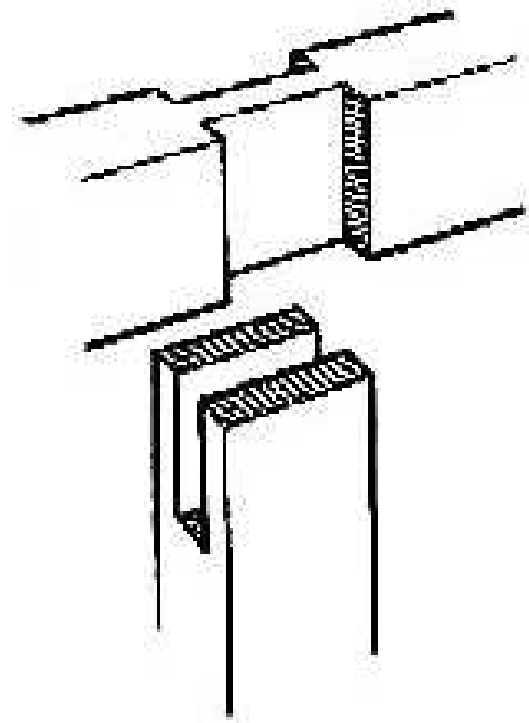
ENSAMBLE CON BARBILLA (USO EN CERCHA)



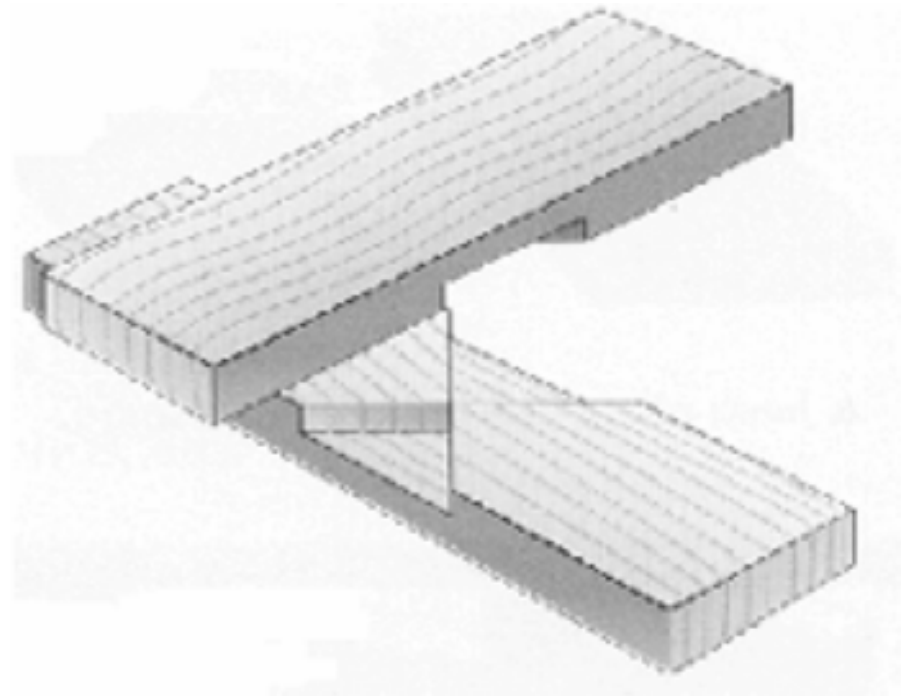
ENSAMBLE CON BARBILLA



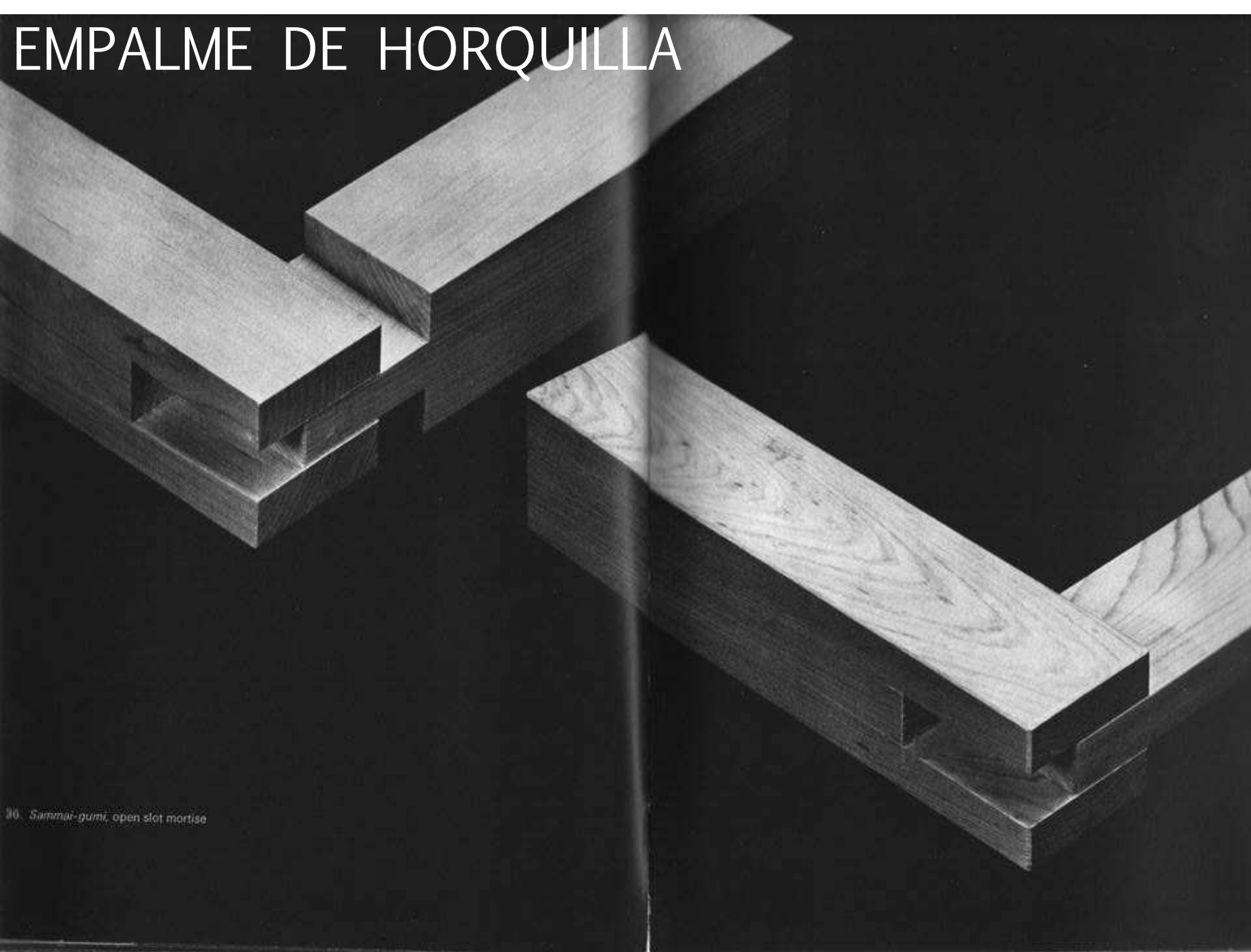
EMPALME DE HORQUILLA



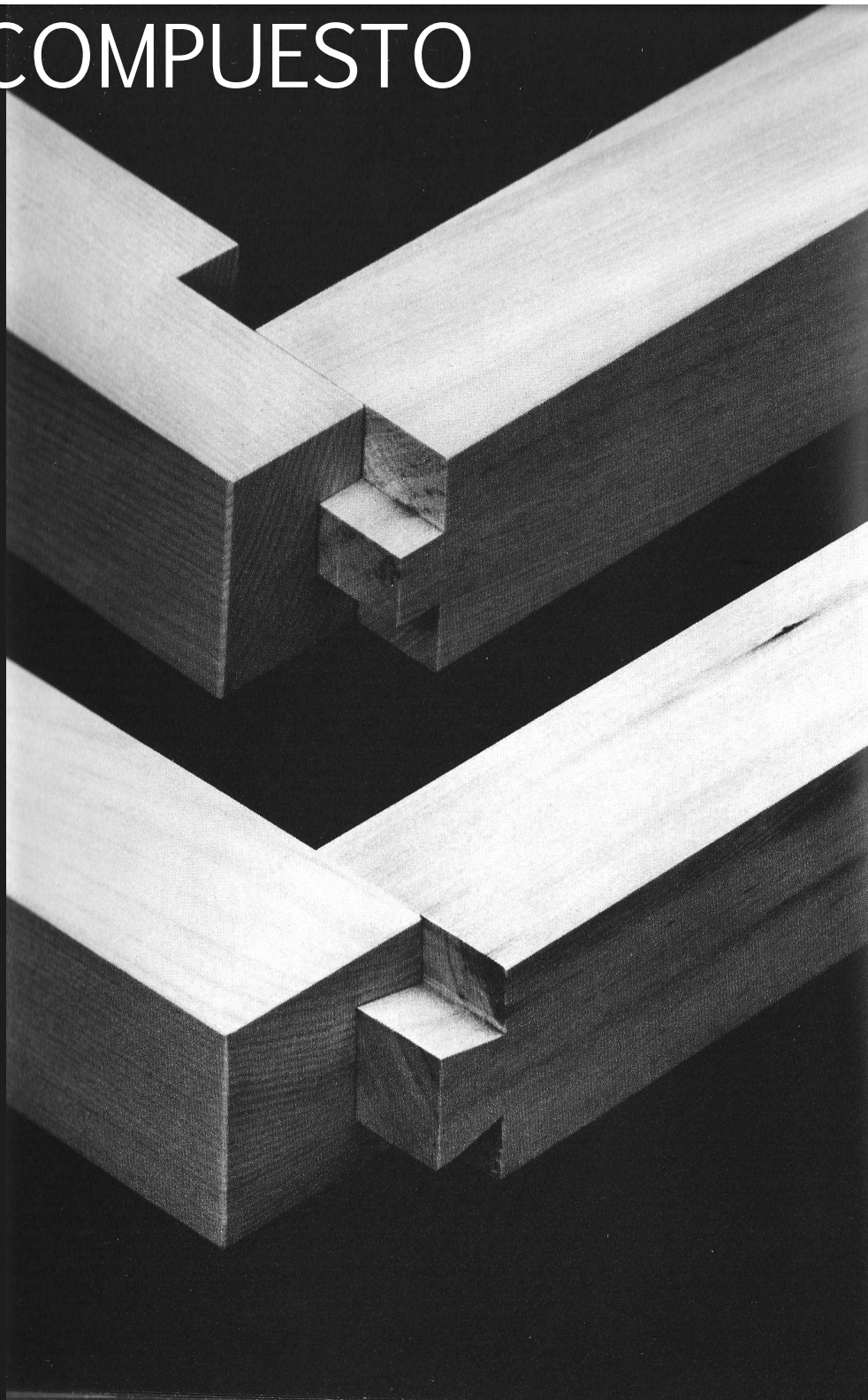
ENSAMBLE EN CRUZ



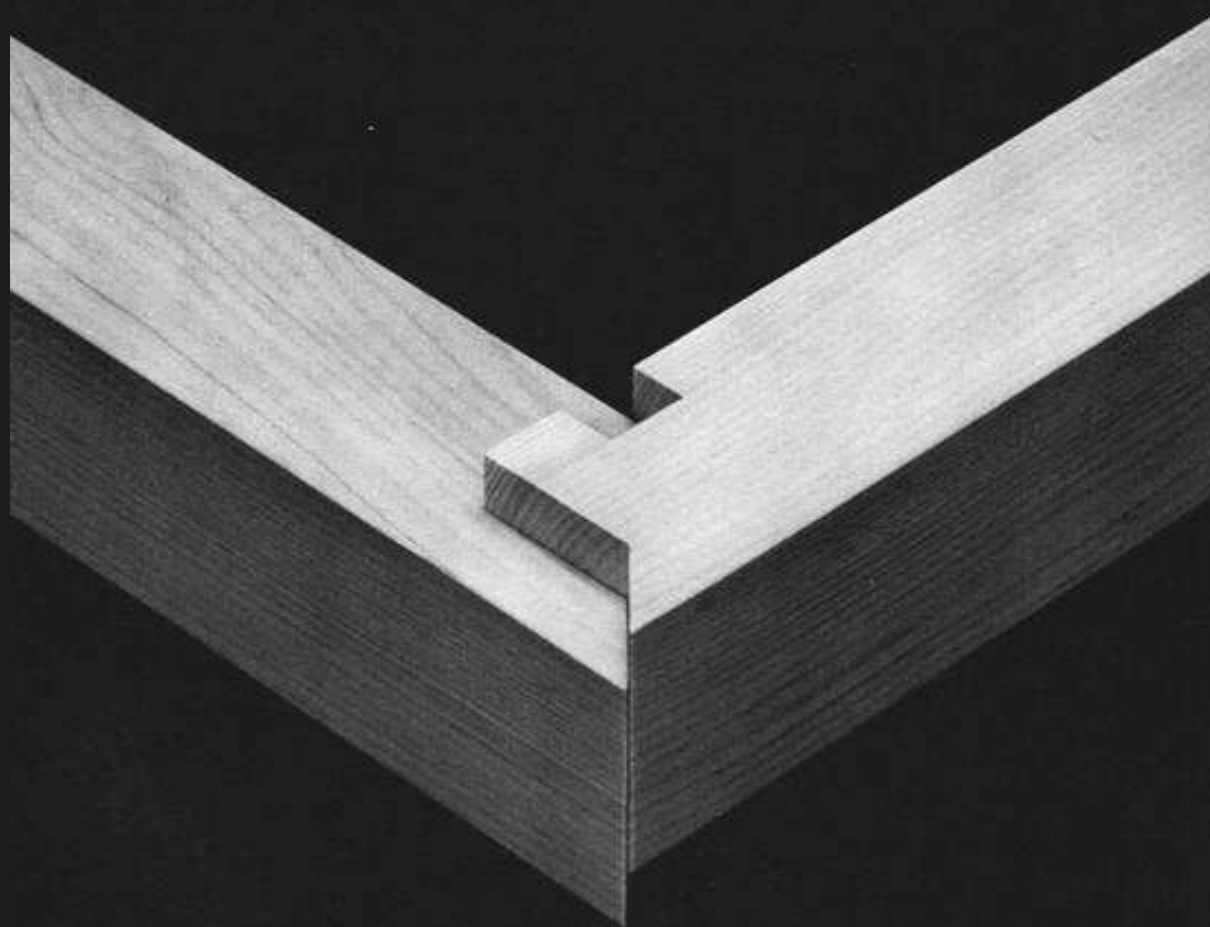
EMPALME DE HORQUILLA



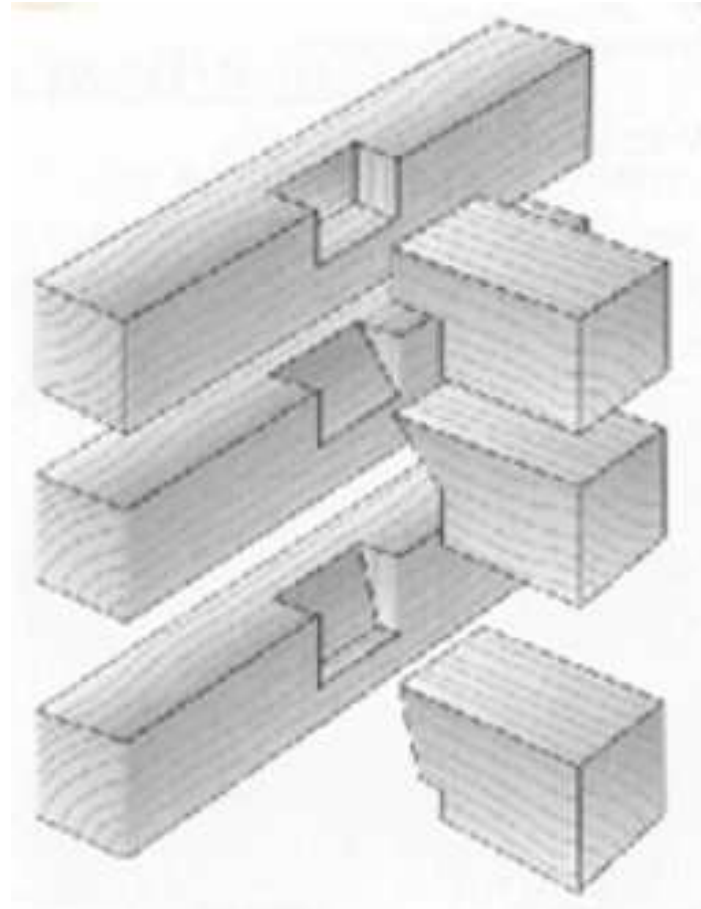
ENSAMBLE COMPUESTO



ENSAMBLE COMPUESTO



ENSAMBLE DE PALMA O ENTALLADURA



ENTALLADURA COLA DE MILANO (CT)



ENTALLADURA COLA DE MILANO : (CT)



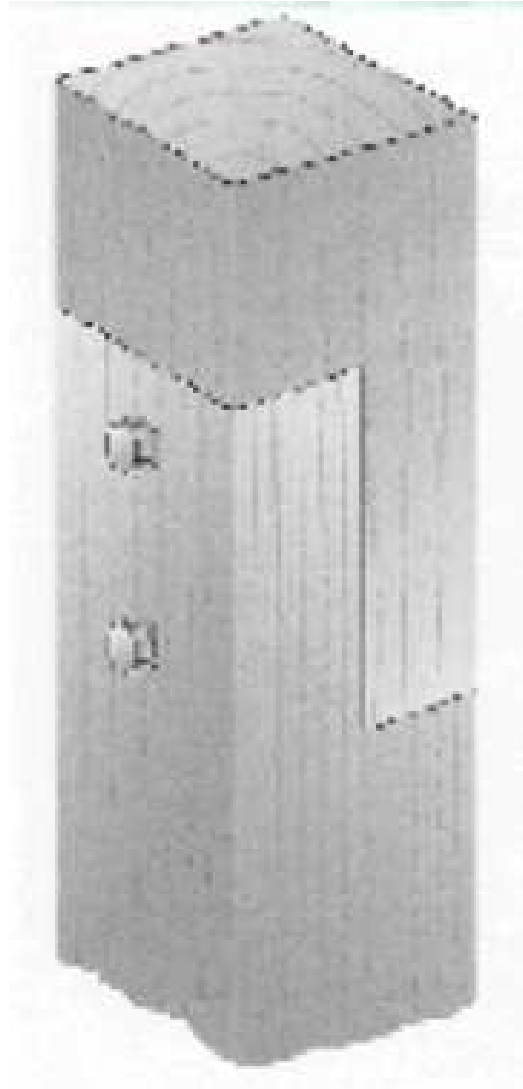
ENTALLADURA COLA DE MILANO (CT)



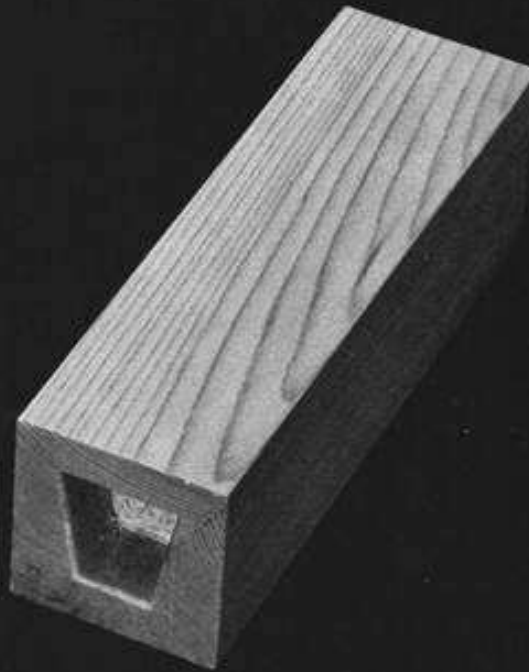
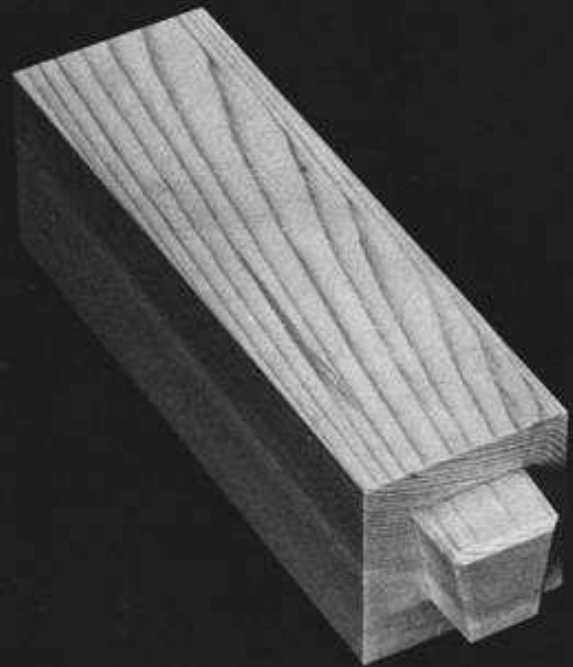
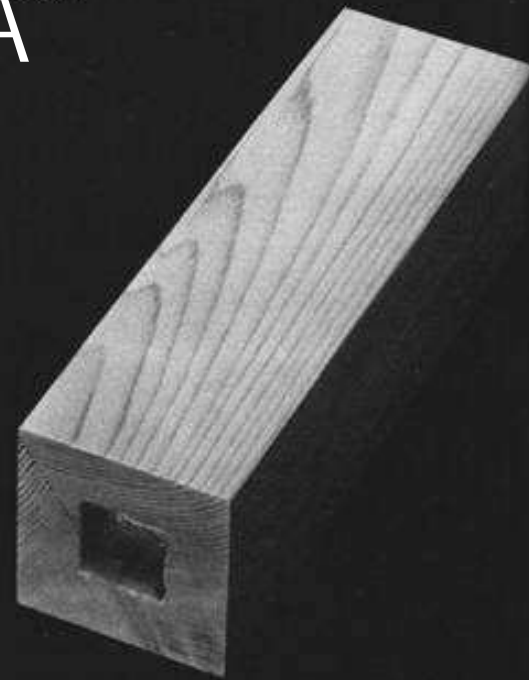
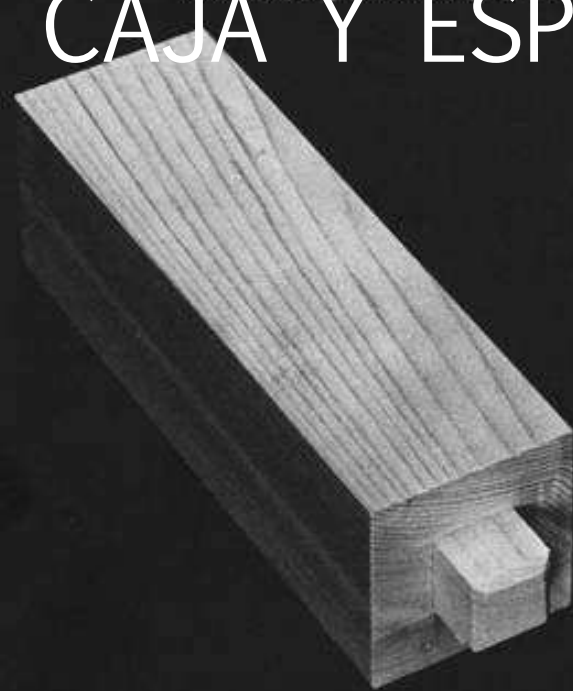
EMPALMES

A MEDIA MADERA
CAJA Y ESPIGA
MACHIEMBRADO
RAYO DE JUPITERÇ
CON COLA DE MILANO
CON LLAVE
CON DIENTES
CON TESTA EN SESGO
CON ESPIGAS
DE HORQUILLA
PICO DE FLAUTA

EMPALME A MEDIA MADERA

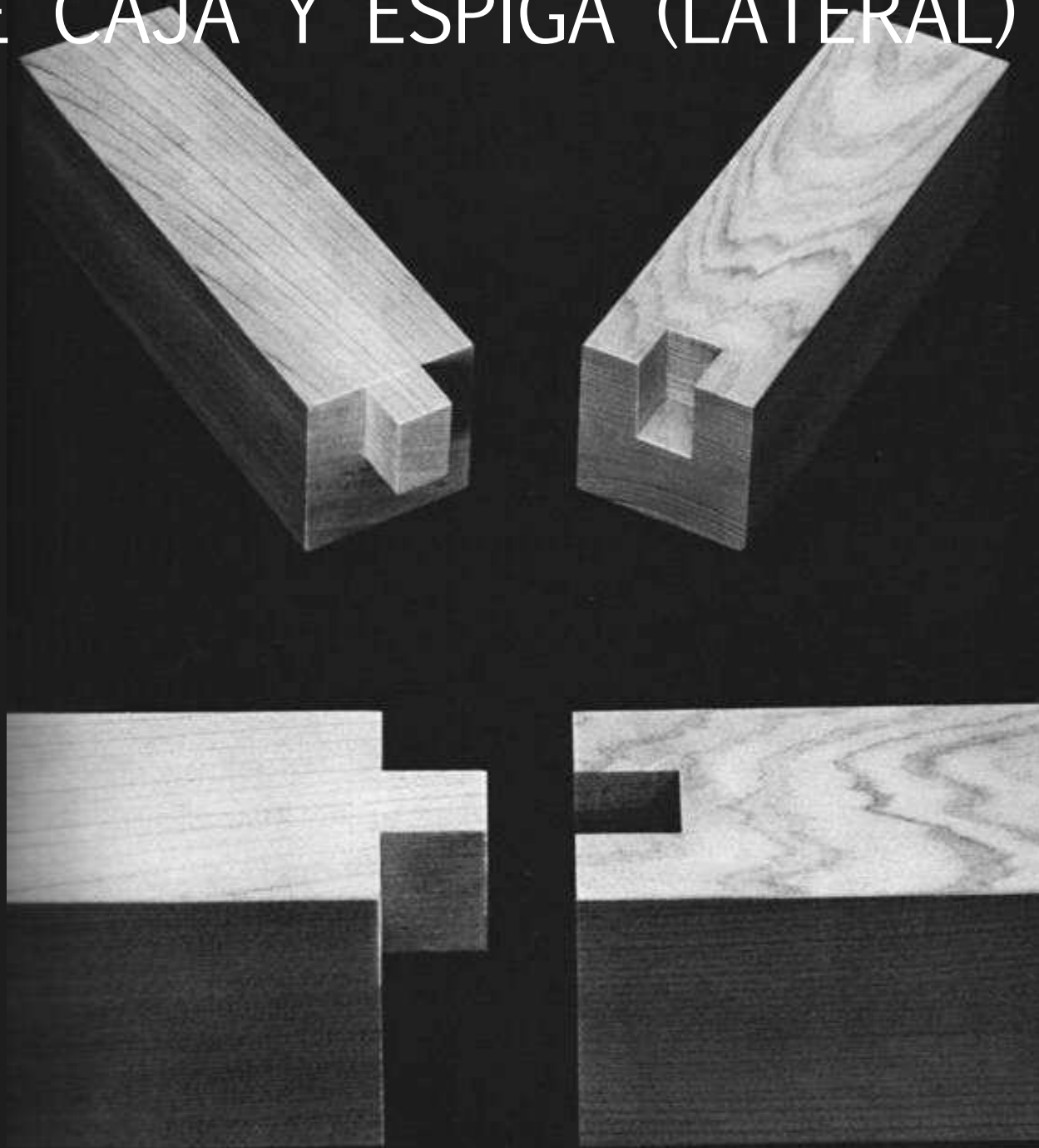


EMPALME CAJA Y ESPIGA

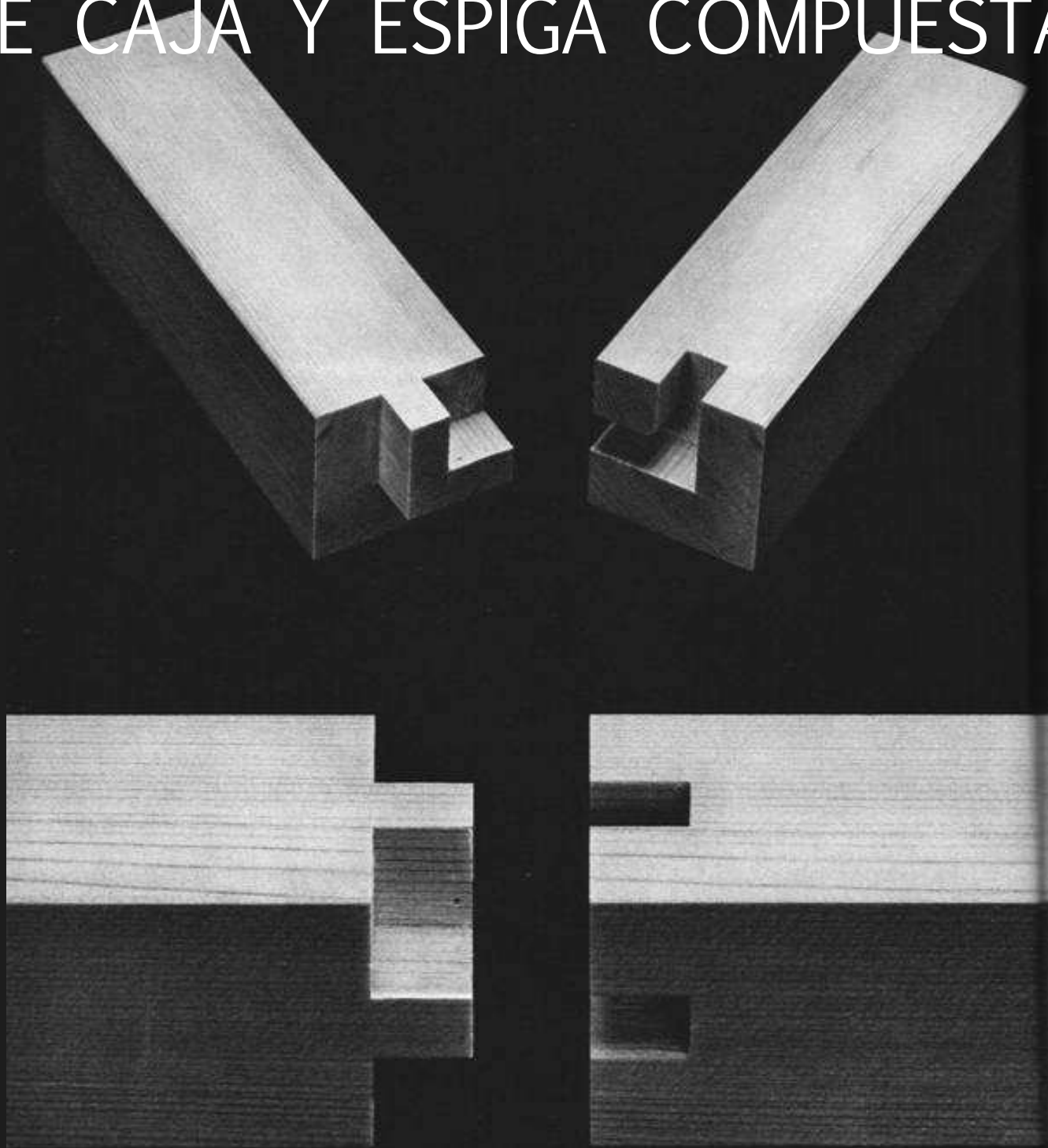


32 (bottom) *Caixa-junta* blind far-shaped stub tenon

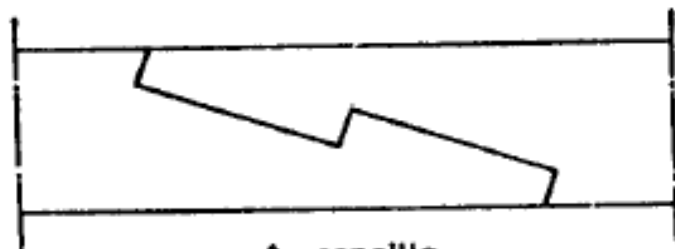
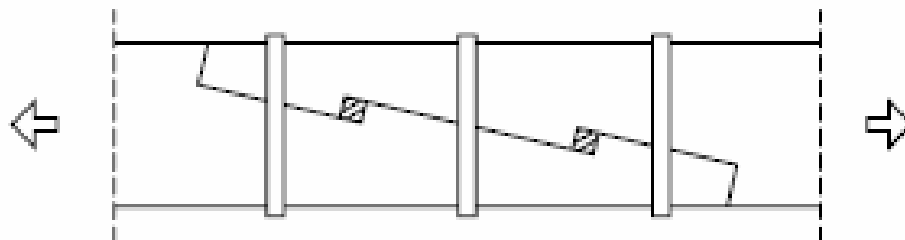
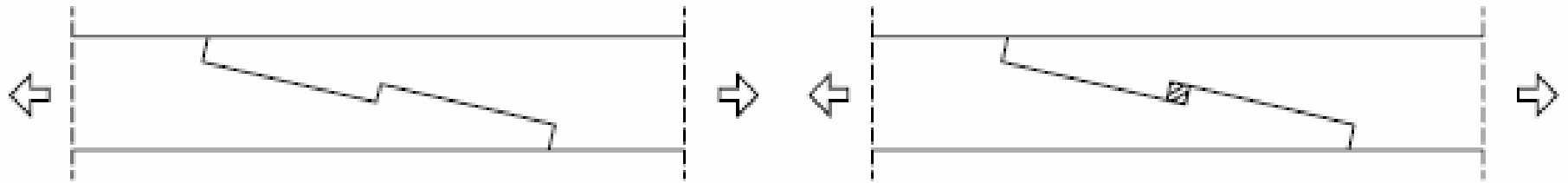
EMPALME CAJA Y ESPIGA (LATERAL)



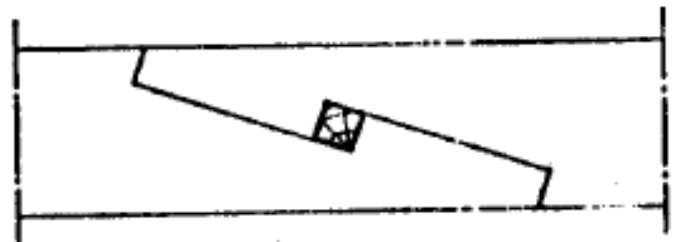
EMPALME CAJA Y ESPIGA COMPUESTA



RAYO DE JUPITER



A - sencillo



B - con llave

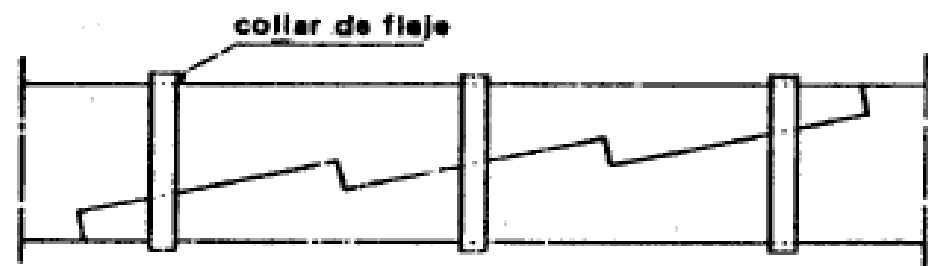
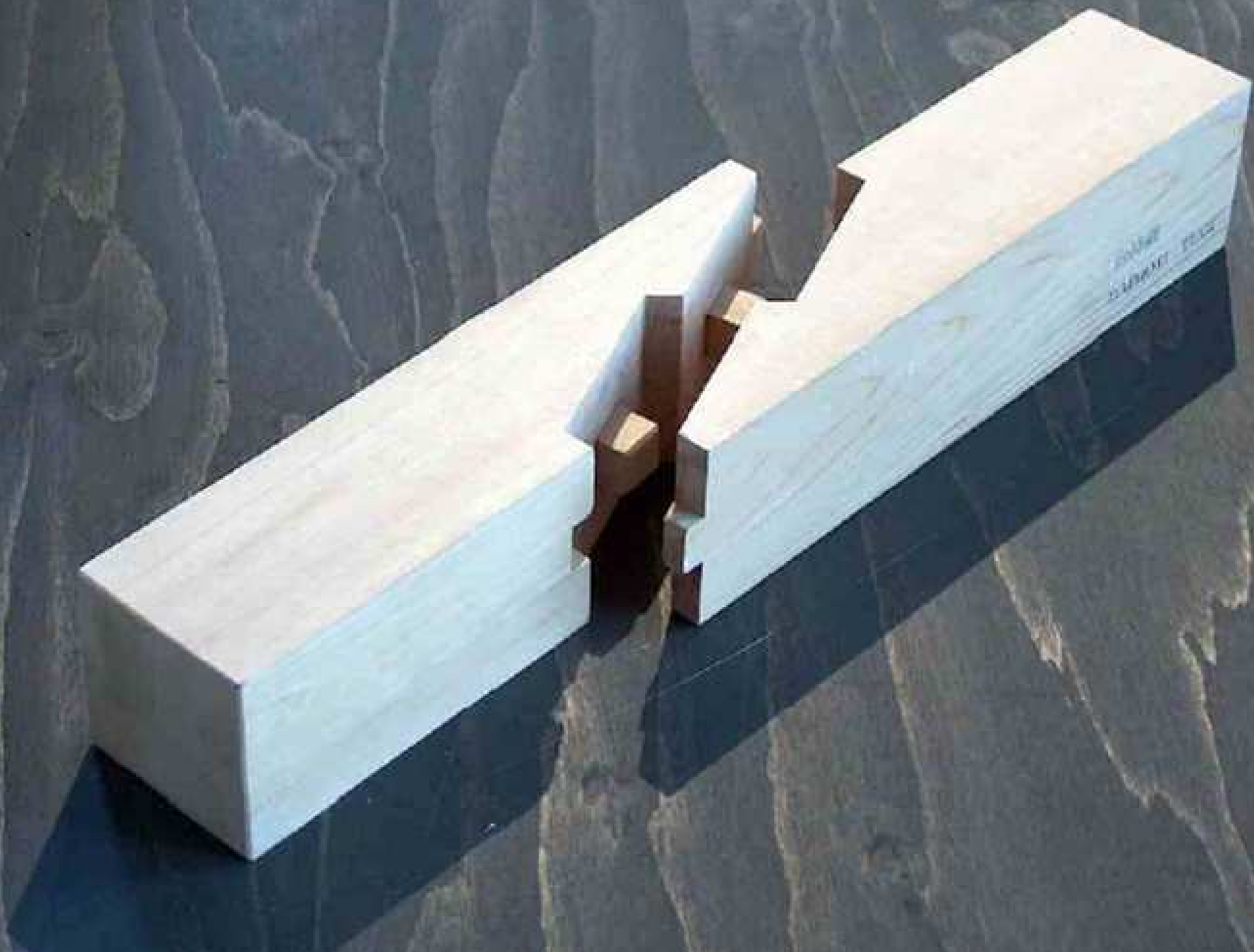


Fig. 18.— Empalme horizontal con herrajes.

RAYO DE JUPITER CON CLAVIJAS



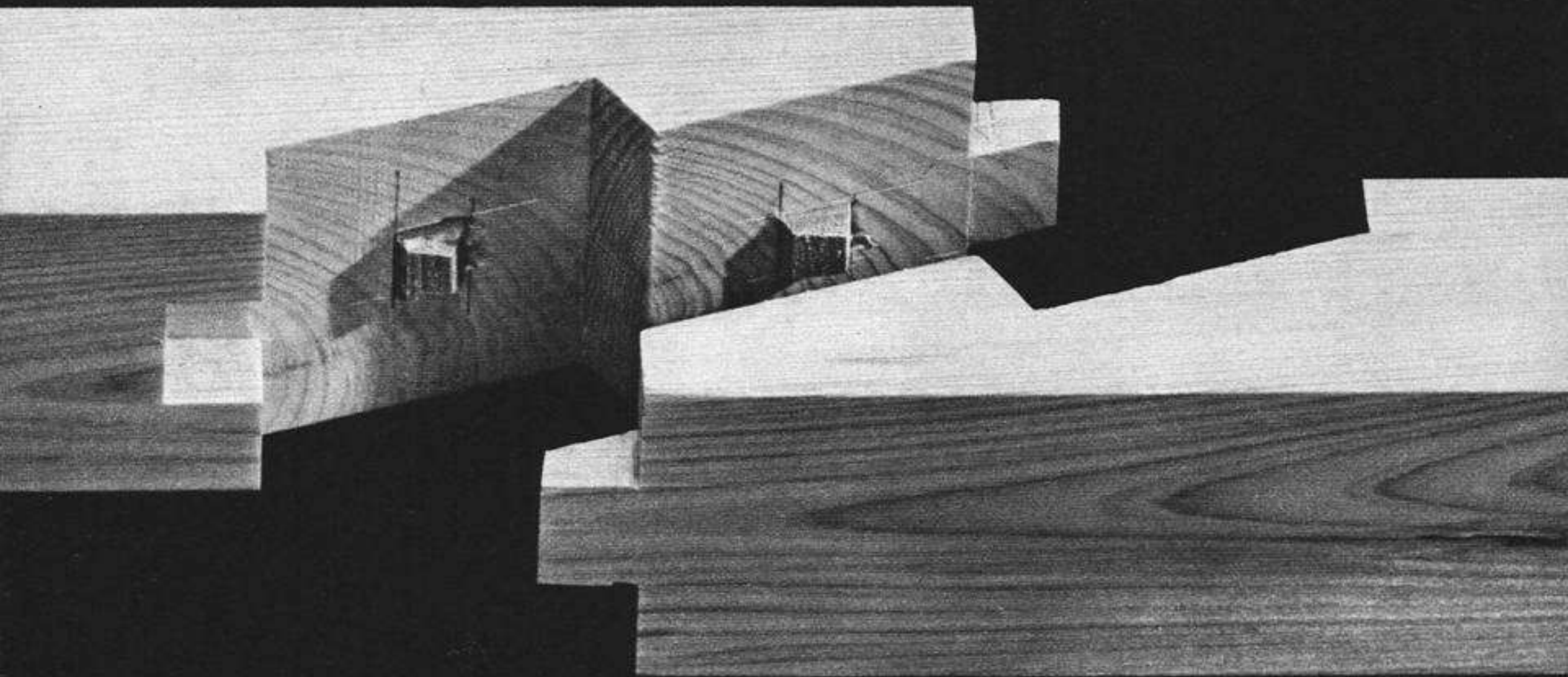
RAYO DE JUPITER CON ESPIGA



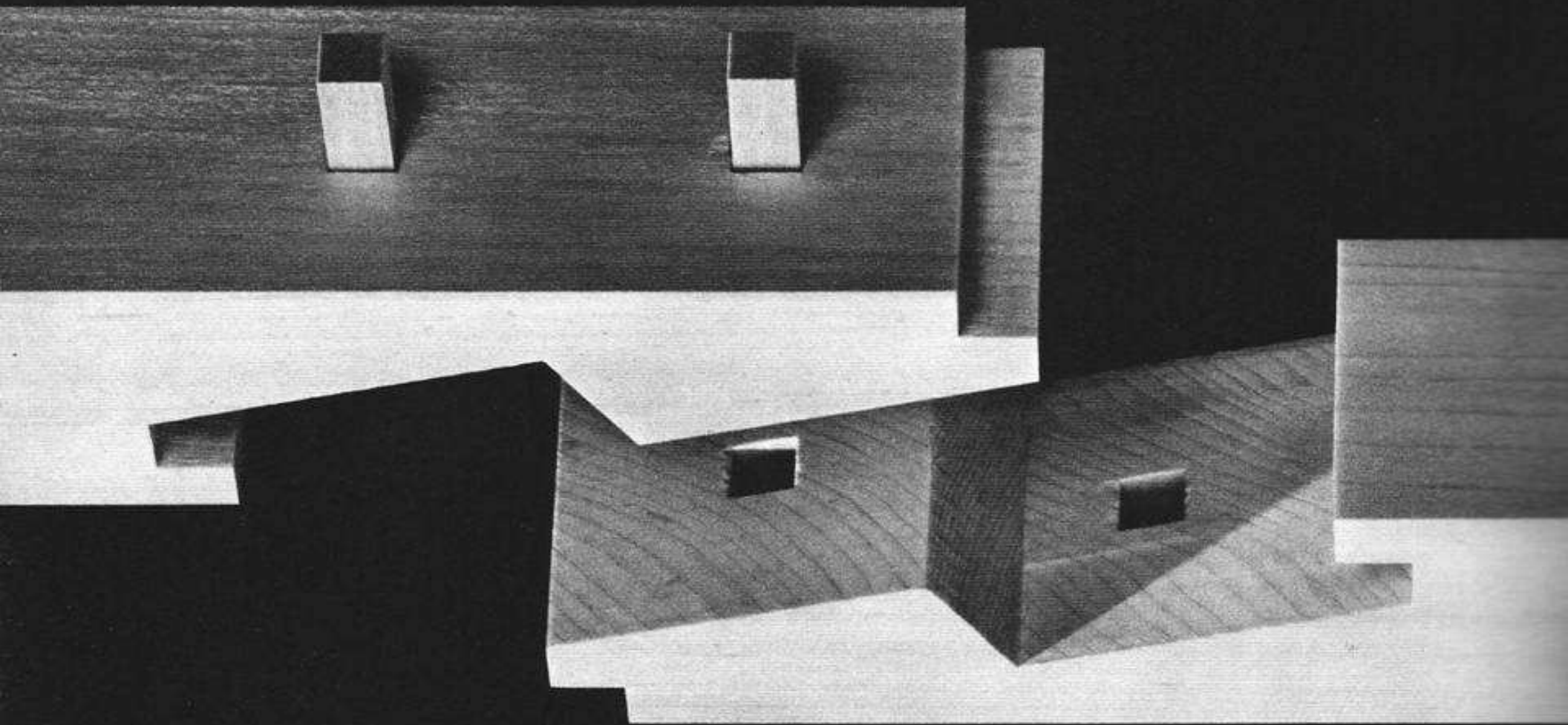
RAYO DE JUPITER CON LLAVE



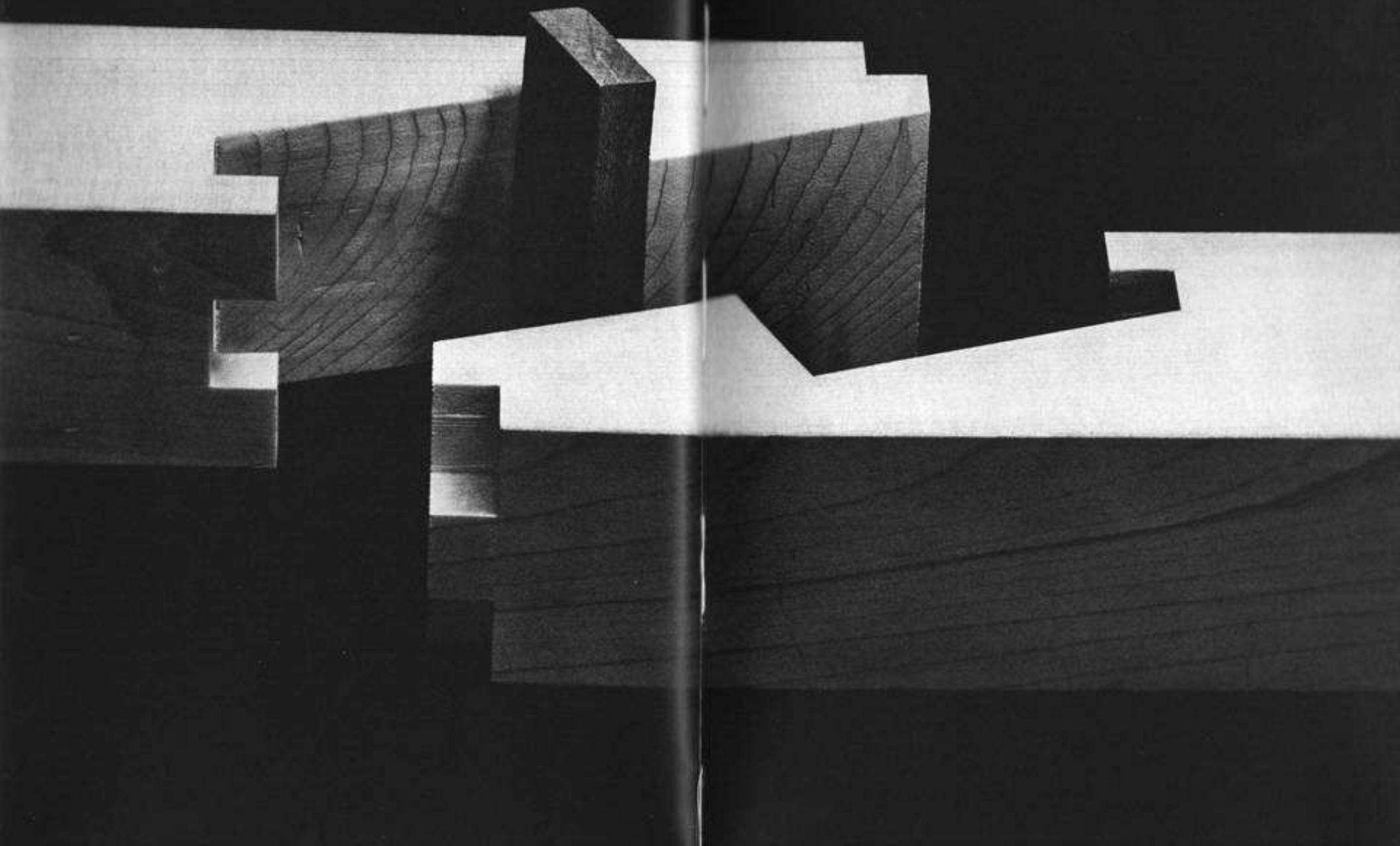
RAYO DE JUPITER CON ESPIGA



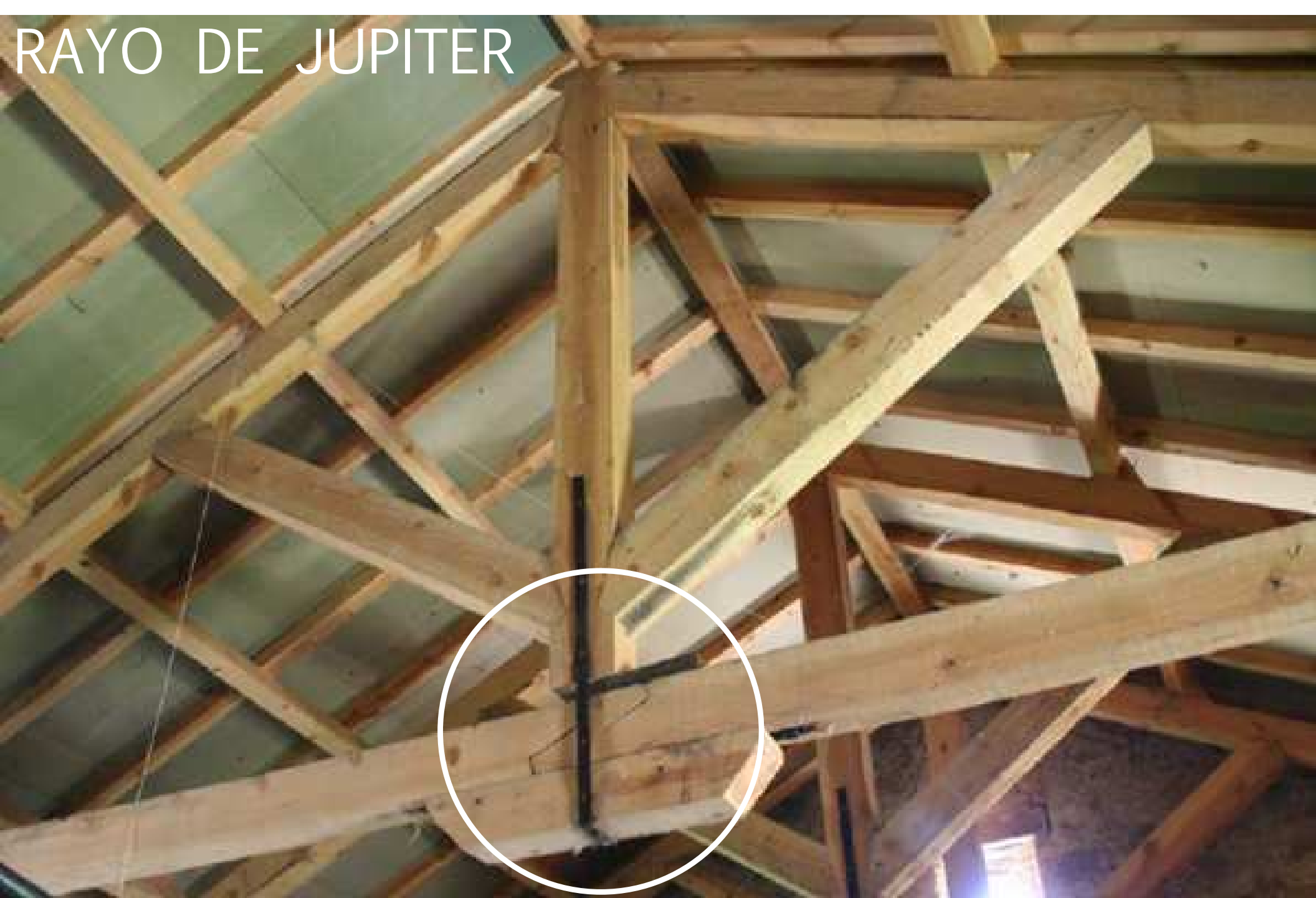
RAYO DE JUPITER CON ESPIGA Y CLAVIJAS



RAYO DE JUPITER CON ESPIGA Y LLAVE



RAYO DE JUPITER



EMPALME CON COLA DE MILANO

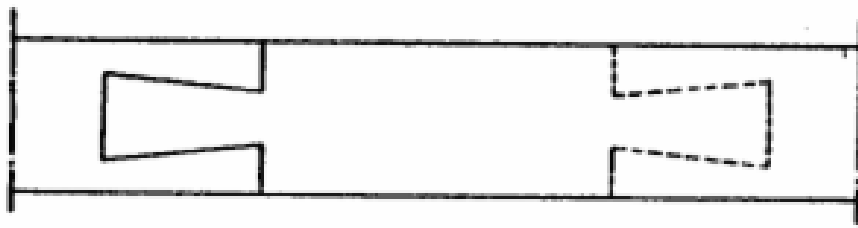
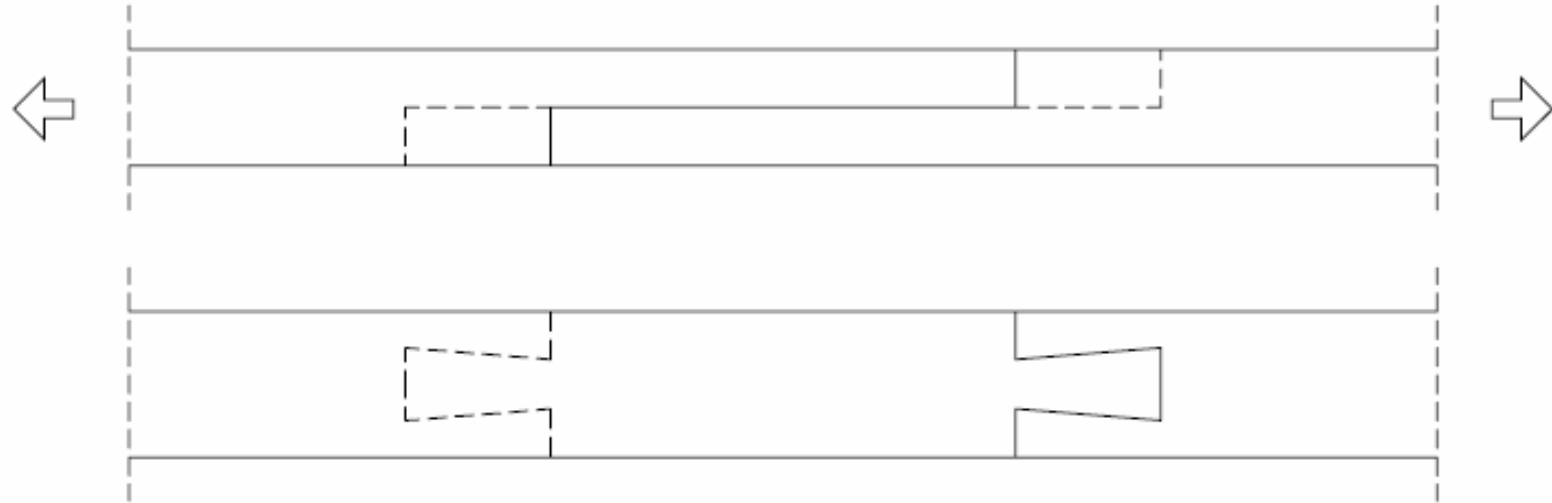
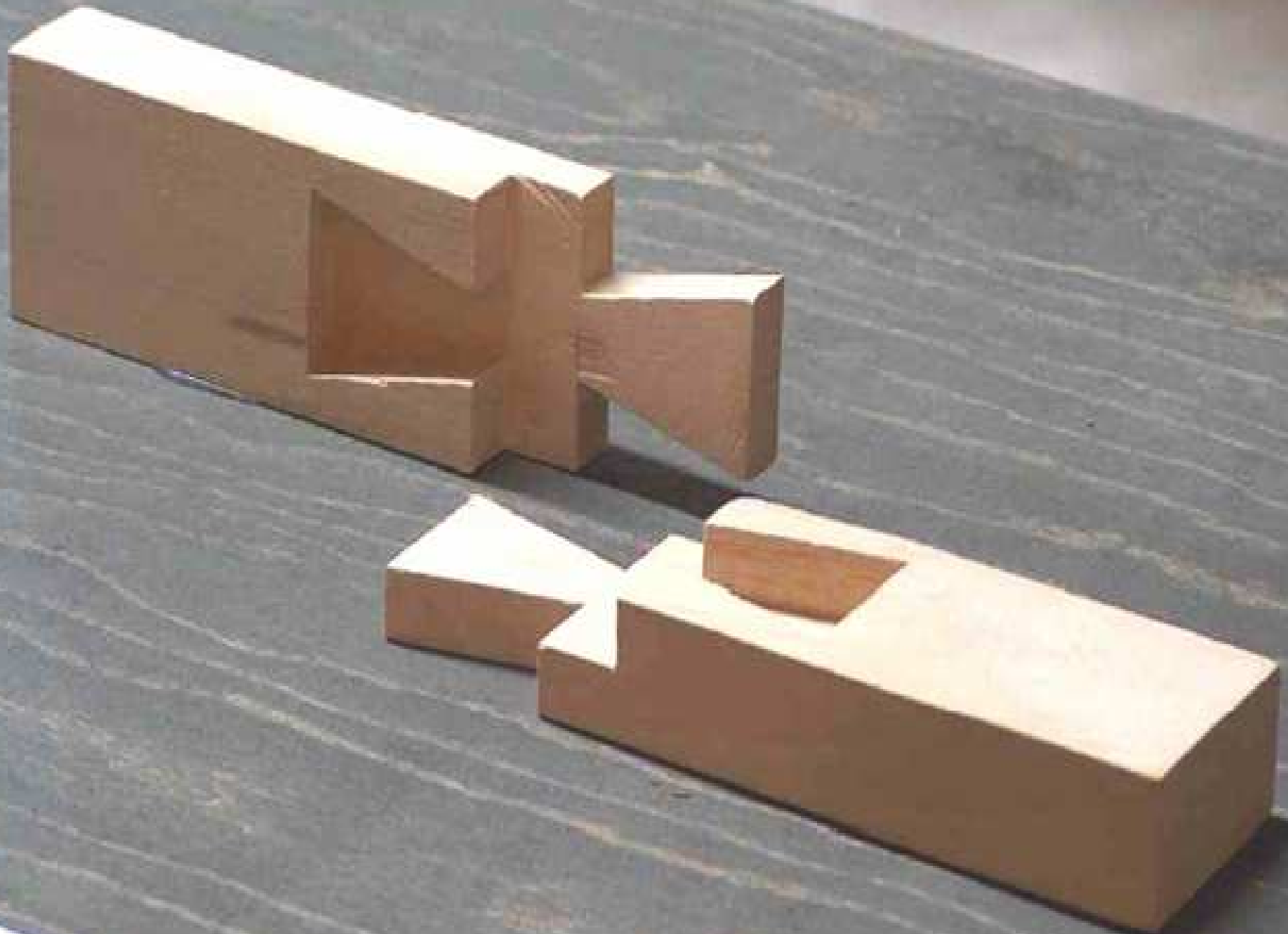


Fig. 17.— Empalme a media madera con cola de milano.

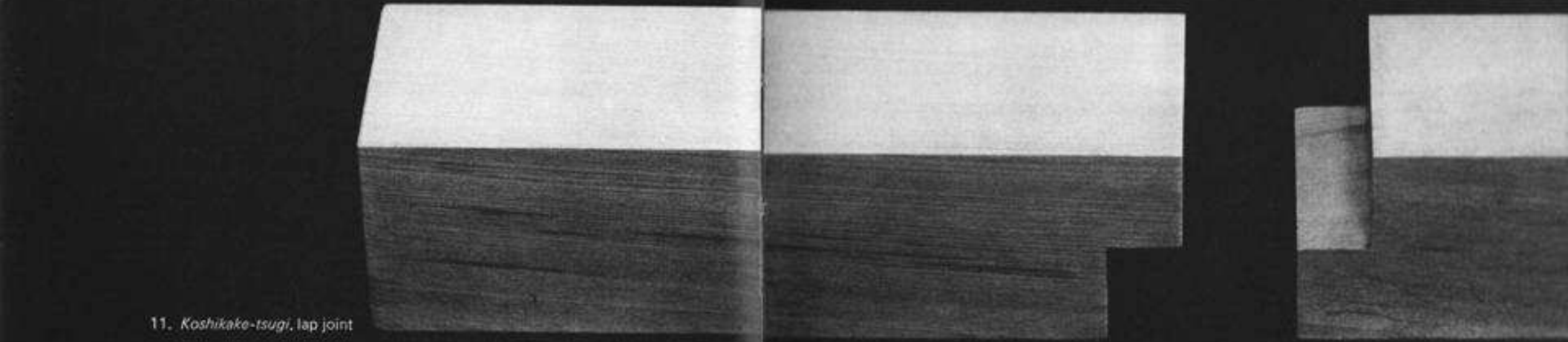
DOBLE COLA DE MILANO



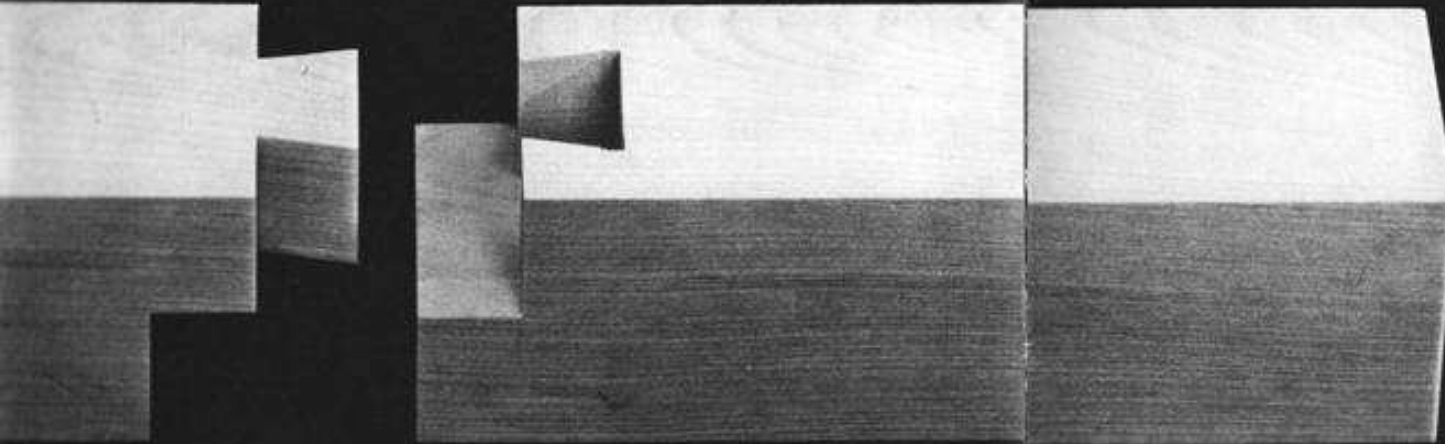
Koke

MEDIA MADERA Y M/M COLA DE MILANO

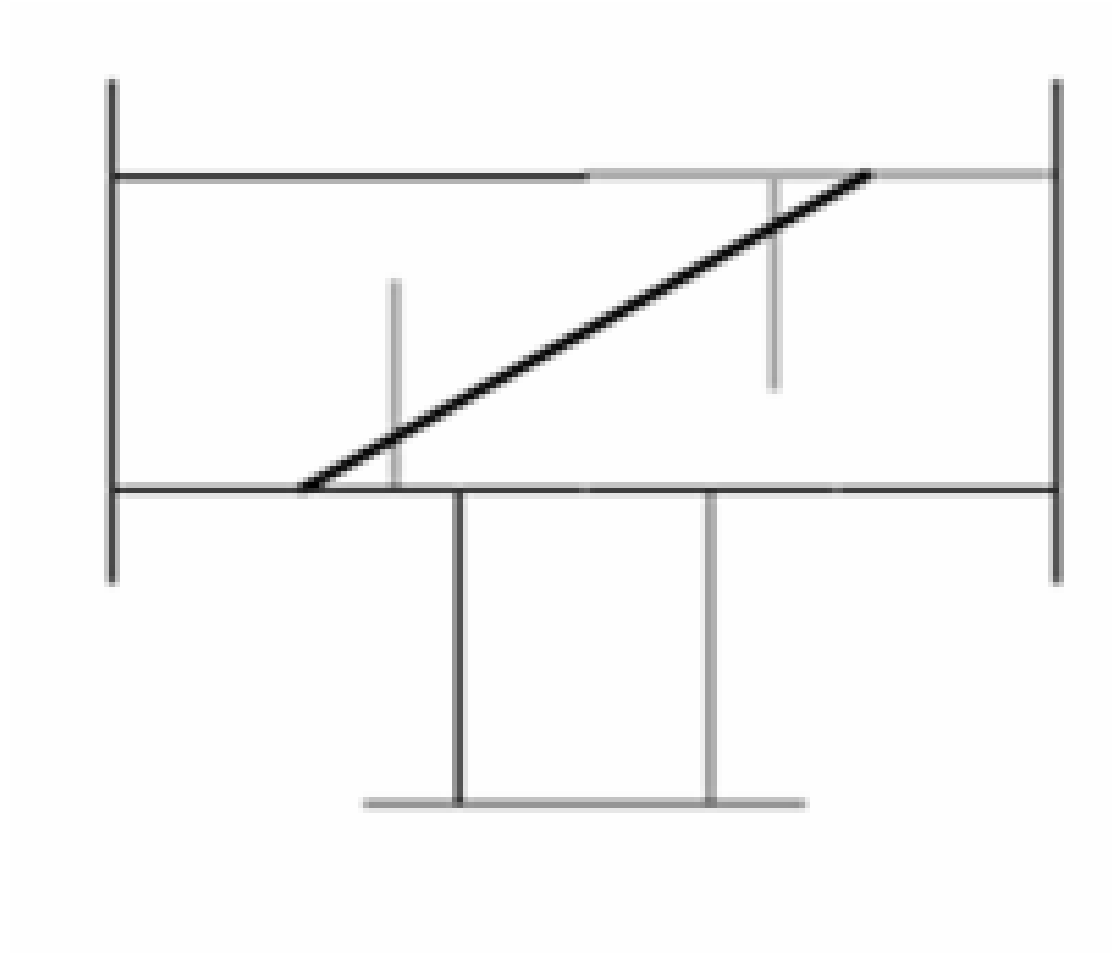
11. *Koshikake-tsugi*, lap joint



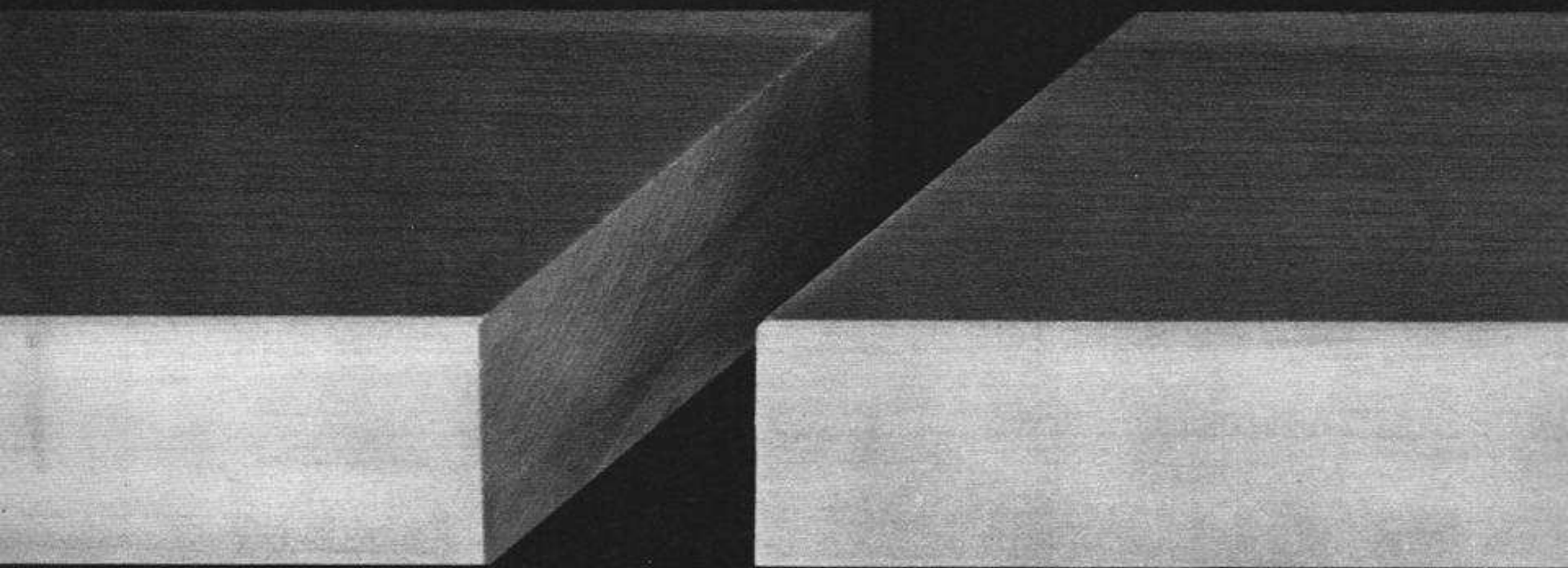
12. *Koshikake-ari-tsugi*, dovetailed lap joint



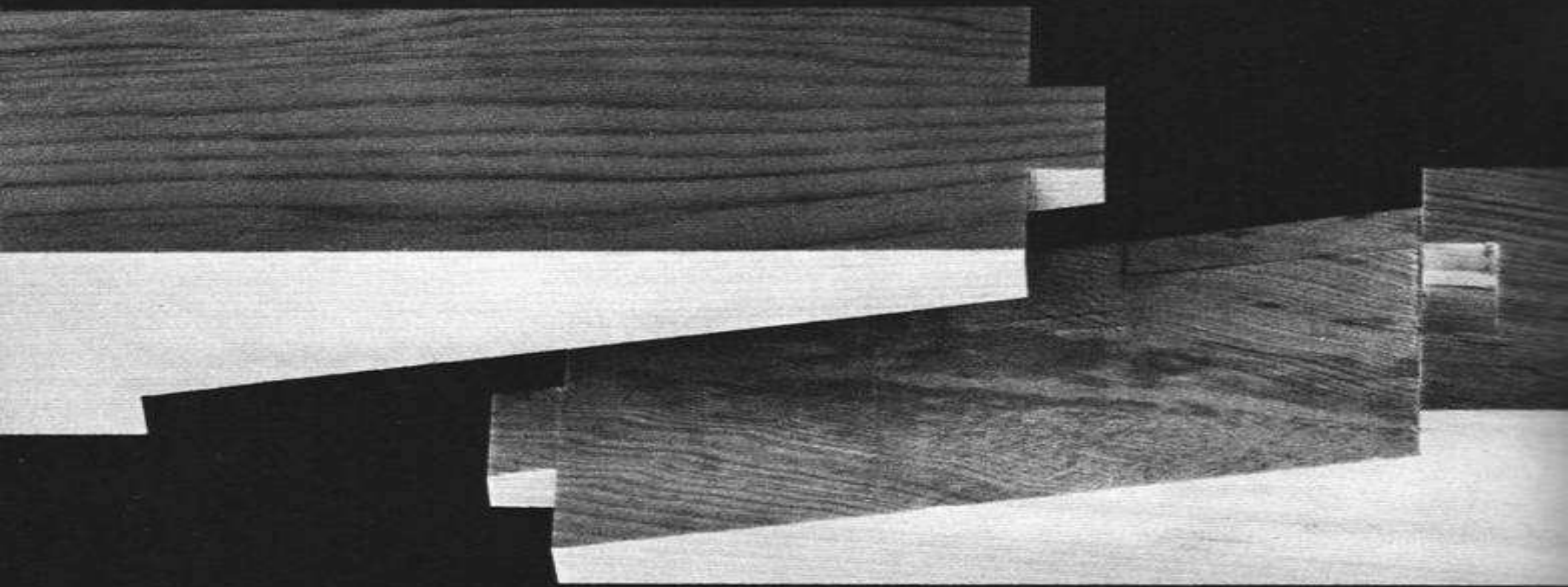
PICO DE FLAUTA

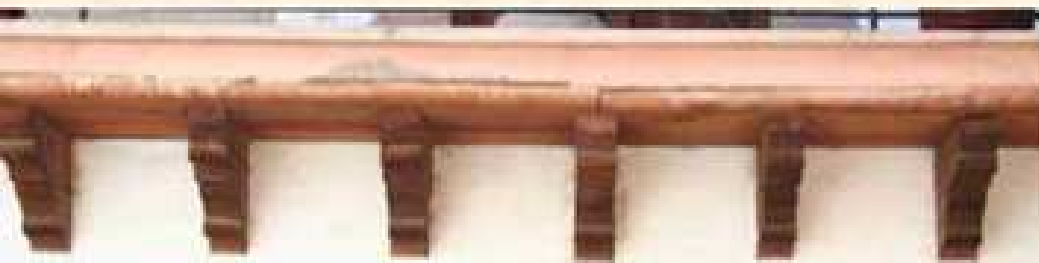


PICO DE FLAUTA DE TOPE

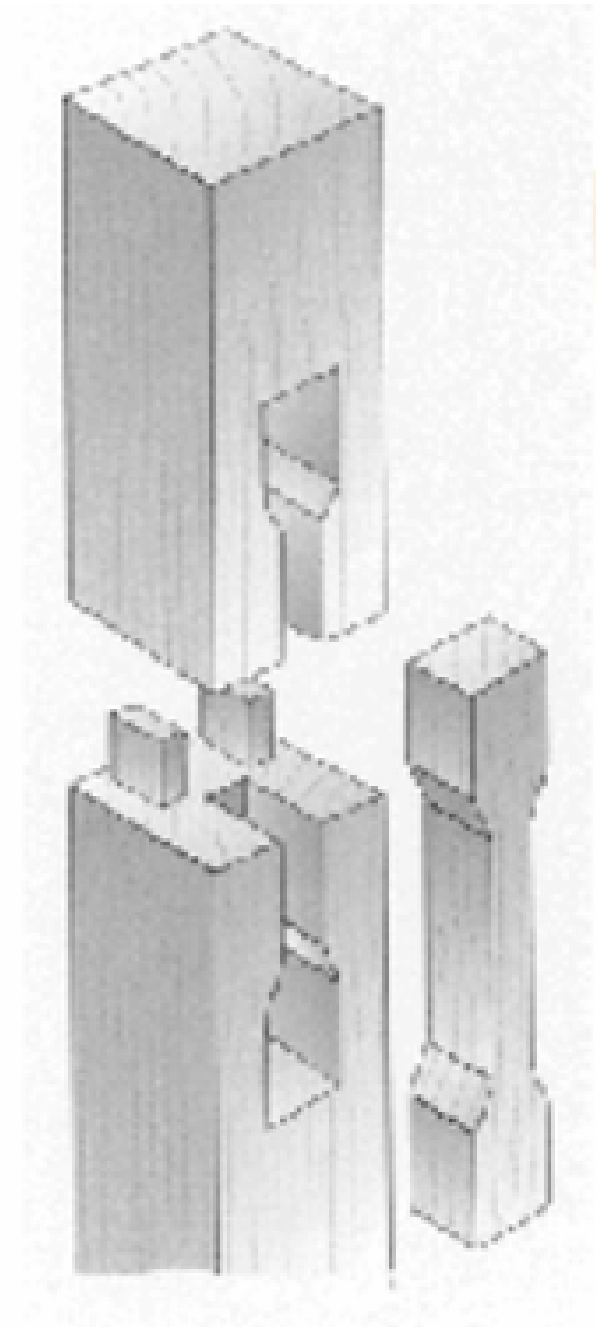


PICO DE FLAUTA CON ESPIGA

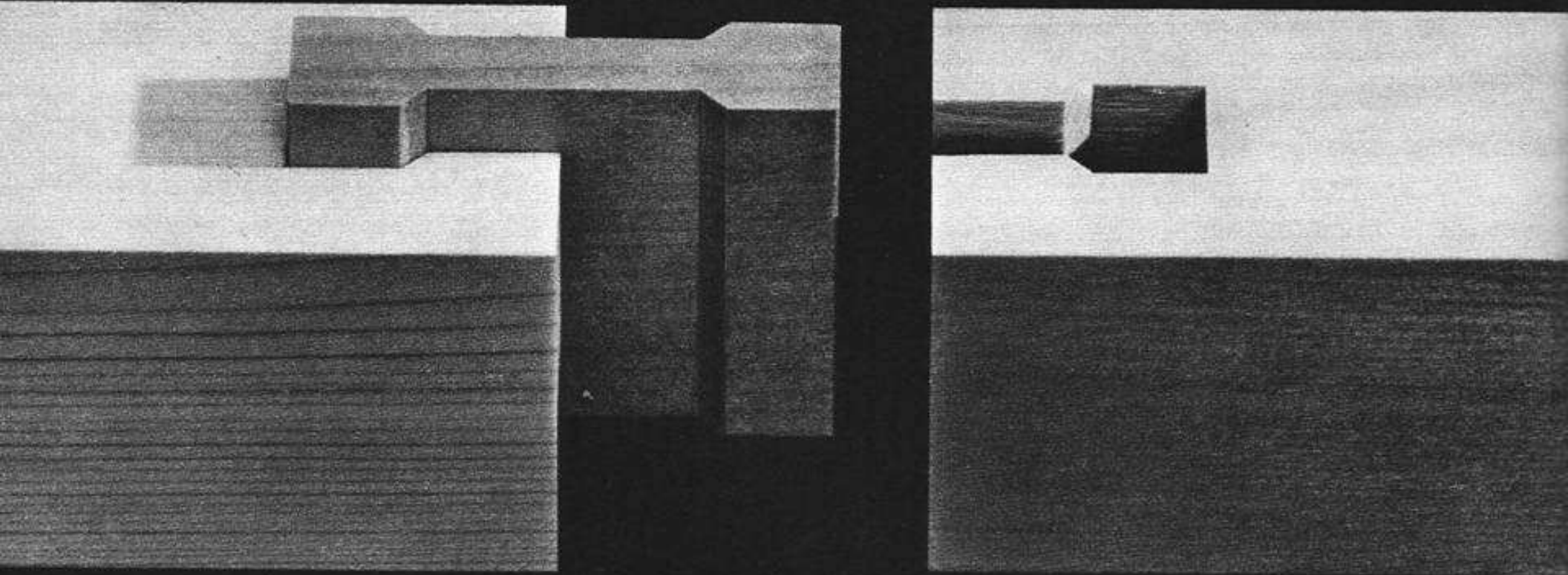




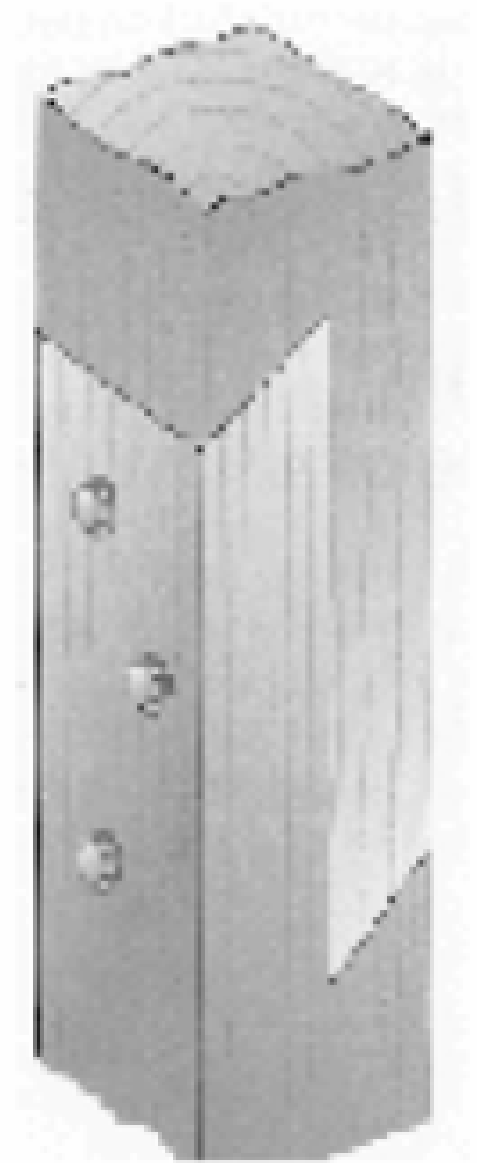
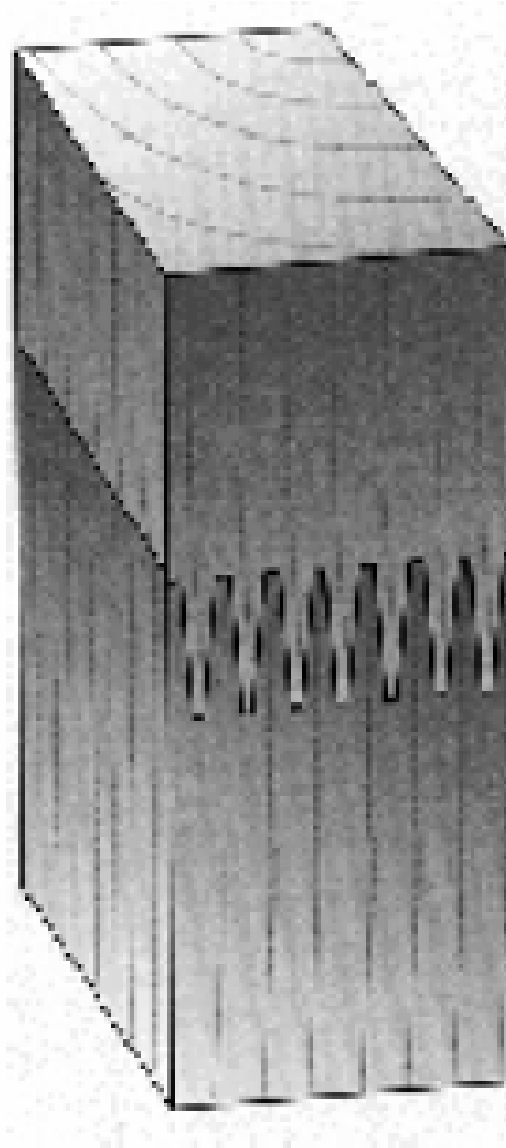
EMPALME CON LLAVE COLA DE MILANO



EMPALME CON LLAVE COLA DE MILANO

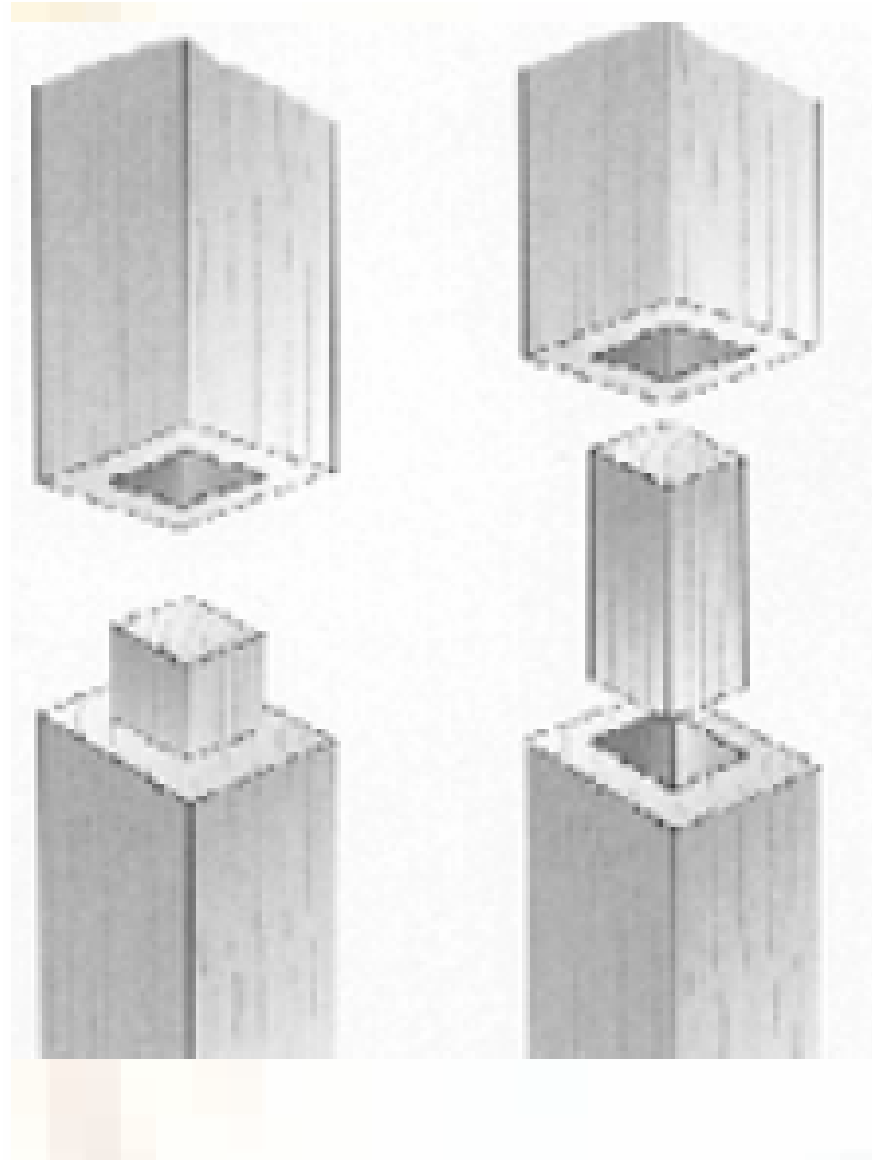


EMPALME CON DIENTES

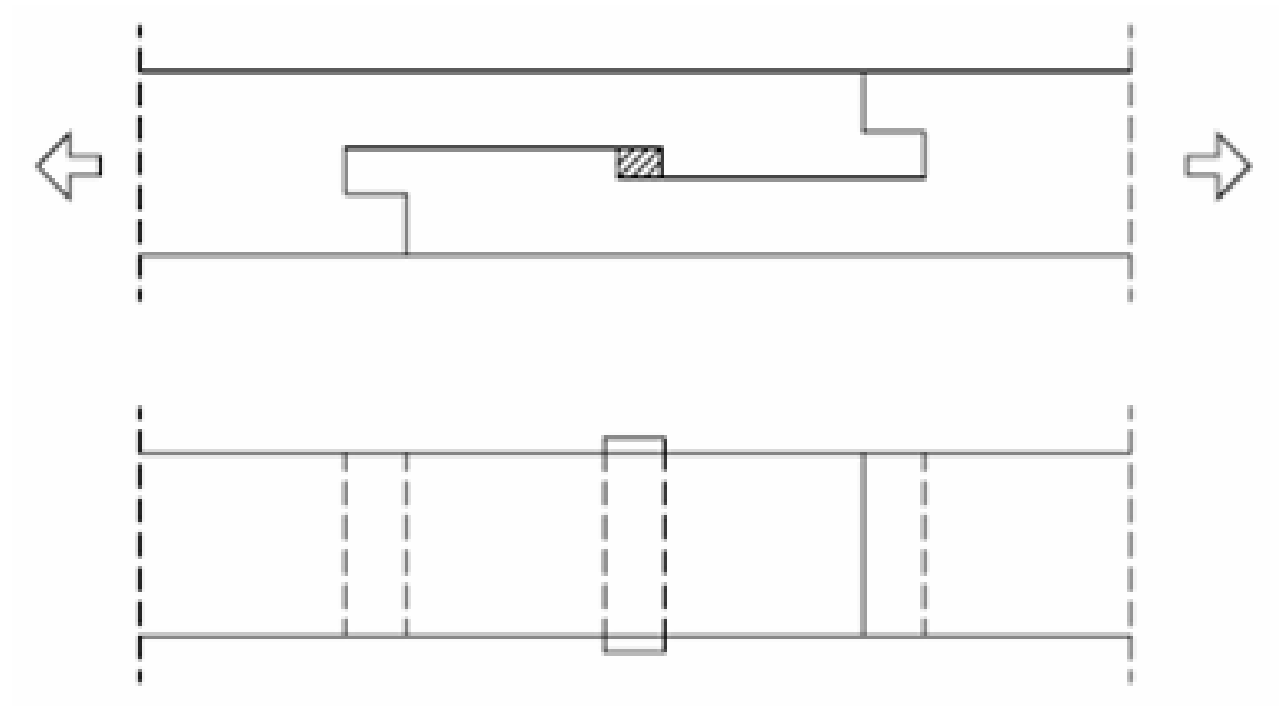


EMPALME CON TESTA EN SESGO

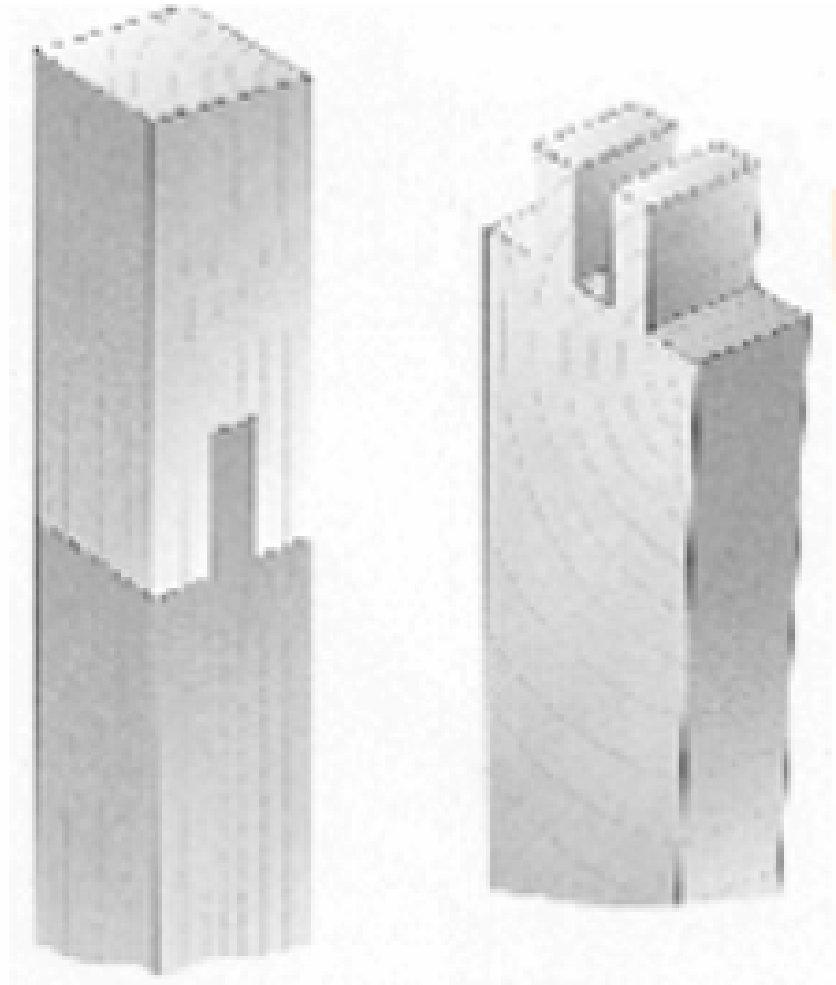
EMPALME CON ESPIGA CUADRADA



EMPALME CON LLAVE (T)

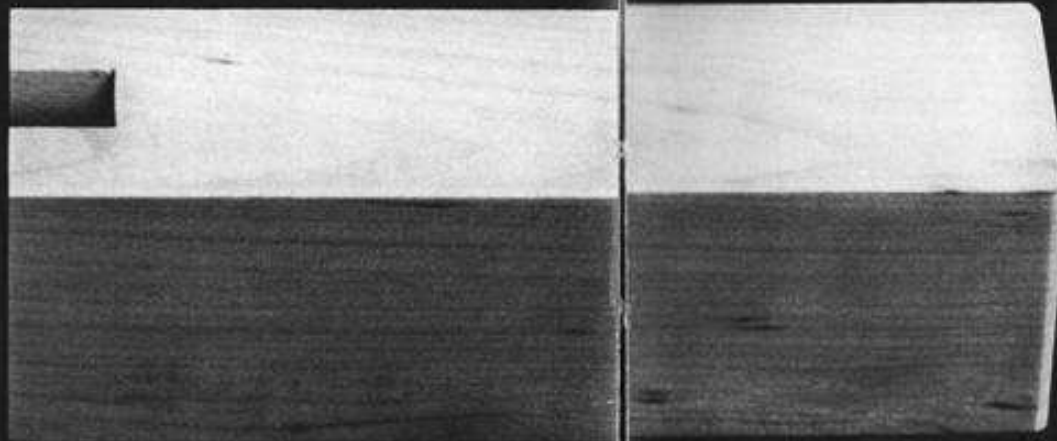
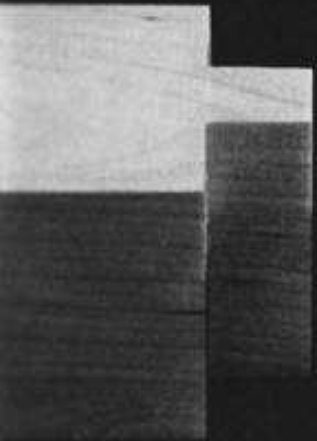
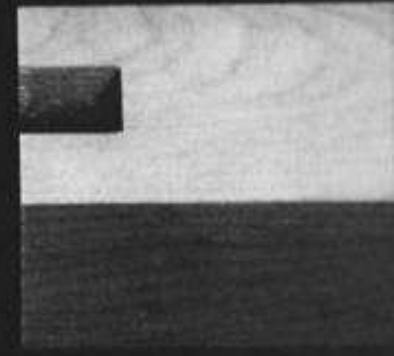
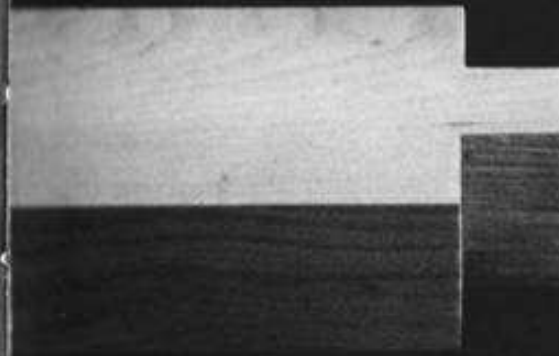


EMPALME CON HORQUILLA



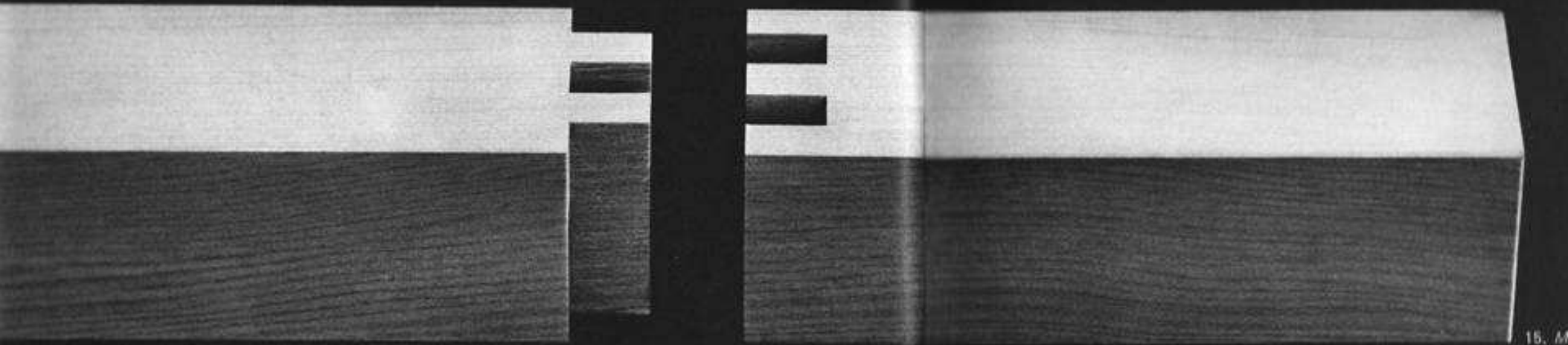
EMPALME CON HORQUILLA

14. *Mechigai-tsugi*, stub tenon joint



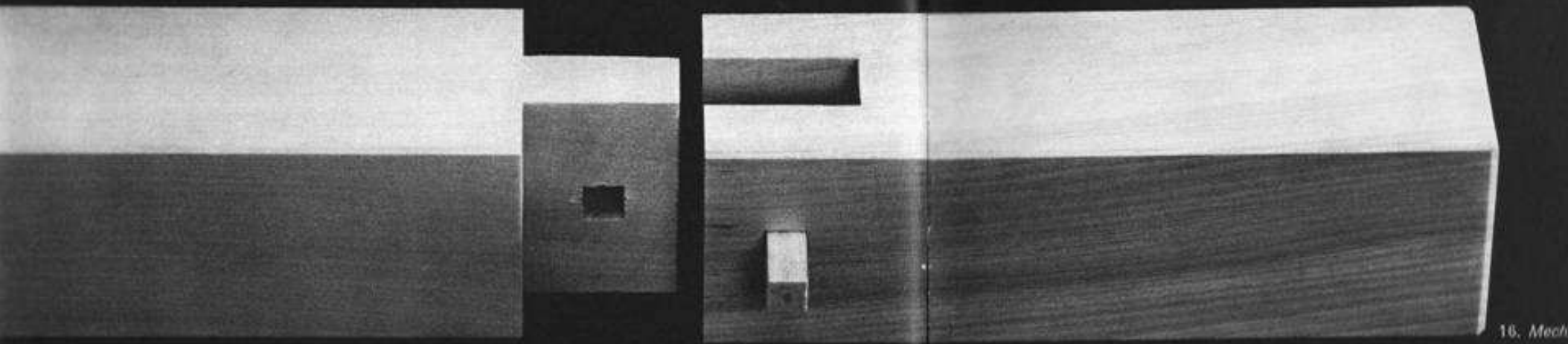
13. *Mechigai-tsugi*, stub tenon joint

EMPALME CON DOBLE HORQUILLA



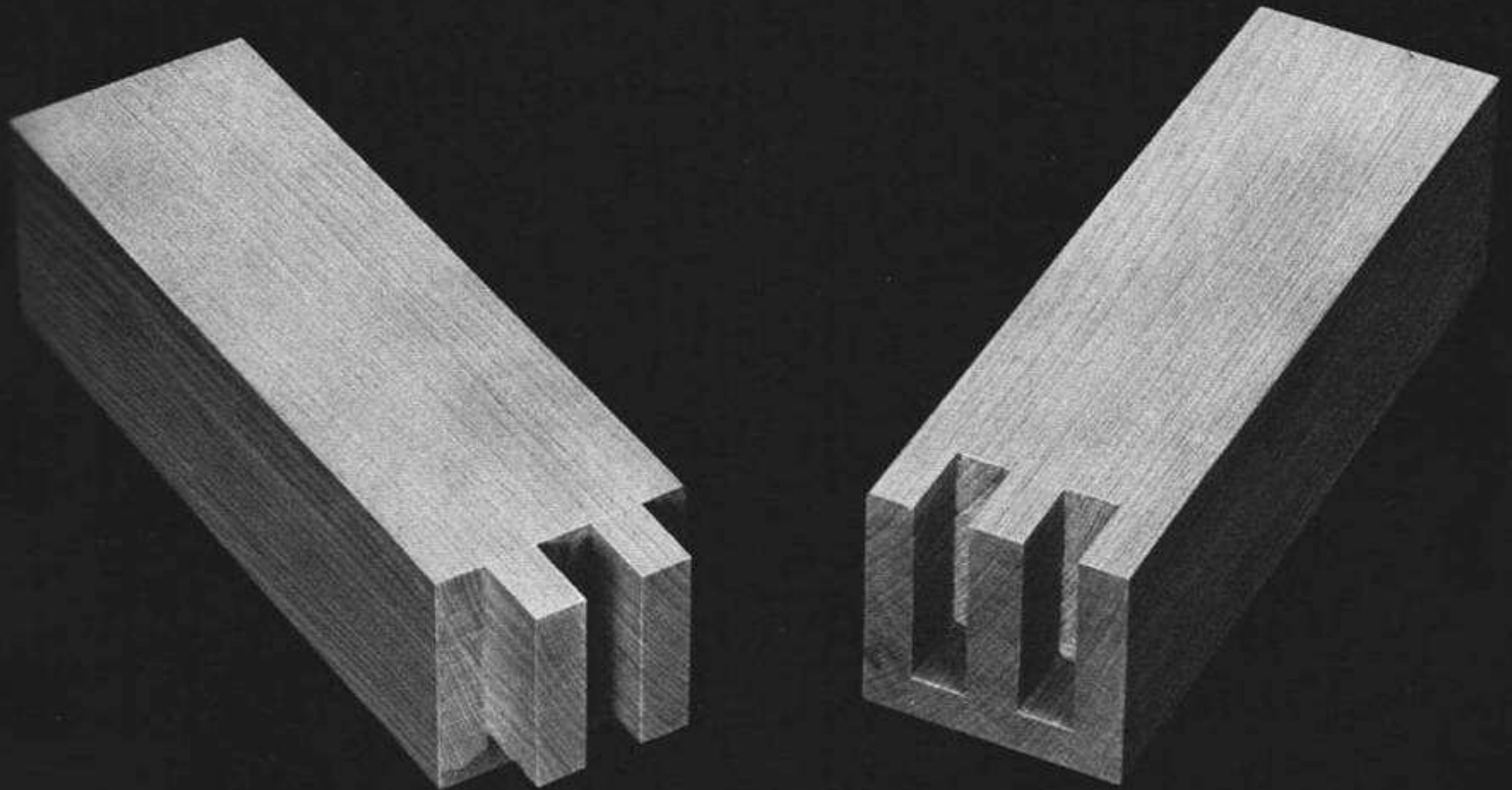
15. M

EMPALME CON HORQUILLA Y CLAVIJA

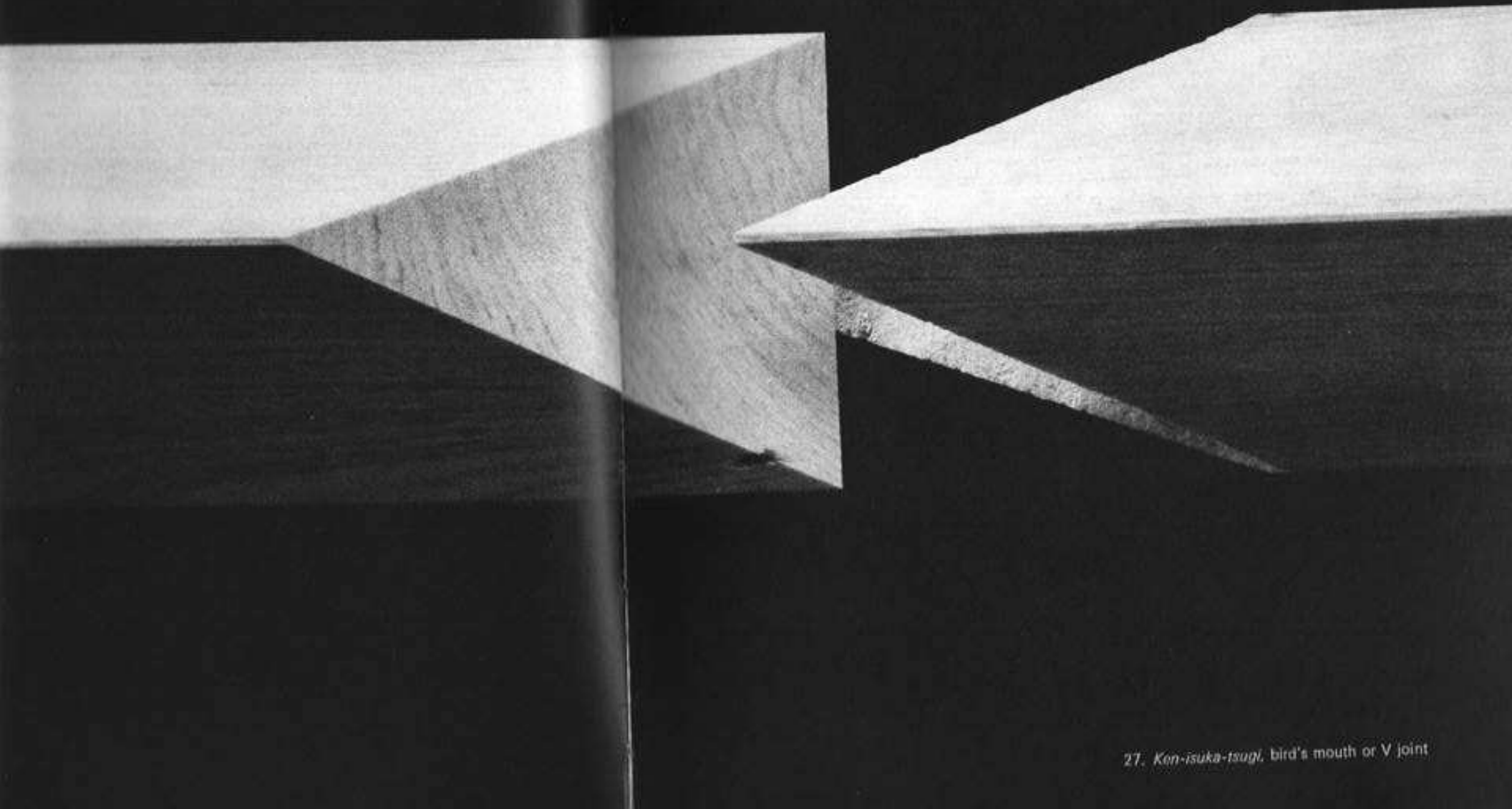


16. Mech

EMPALME DE MEDIA HORQUILLA



EMPALME DE MACHO Y HEMBRA O BOCA DE PEZ

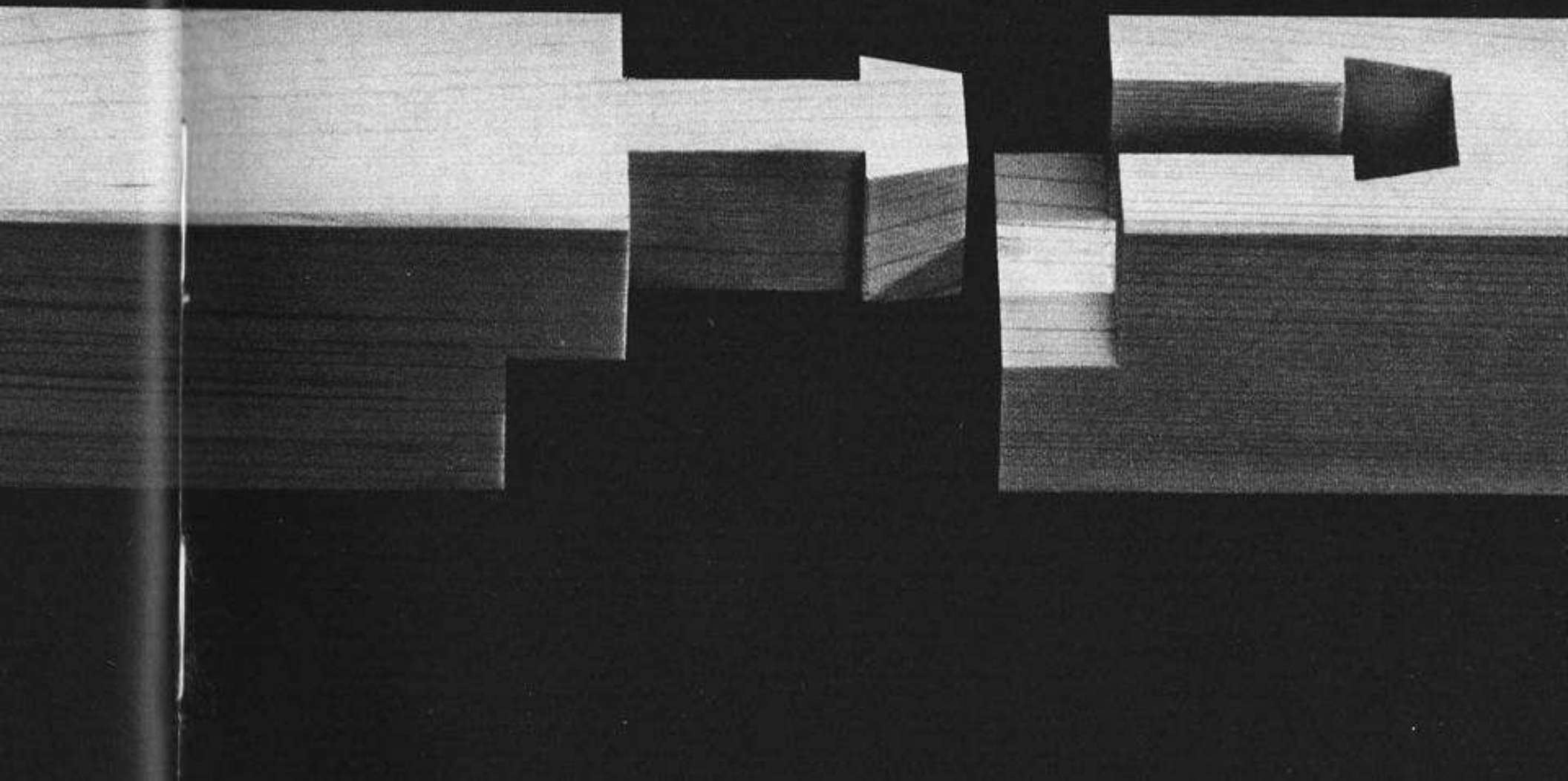


27. *Ken-isuka-tsugi*, bird's mouth or V joint

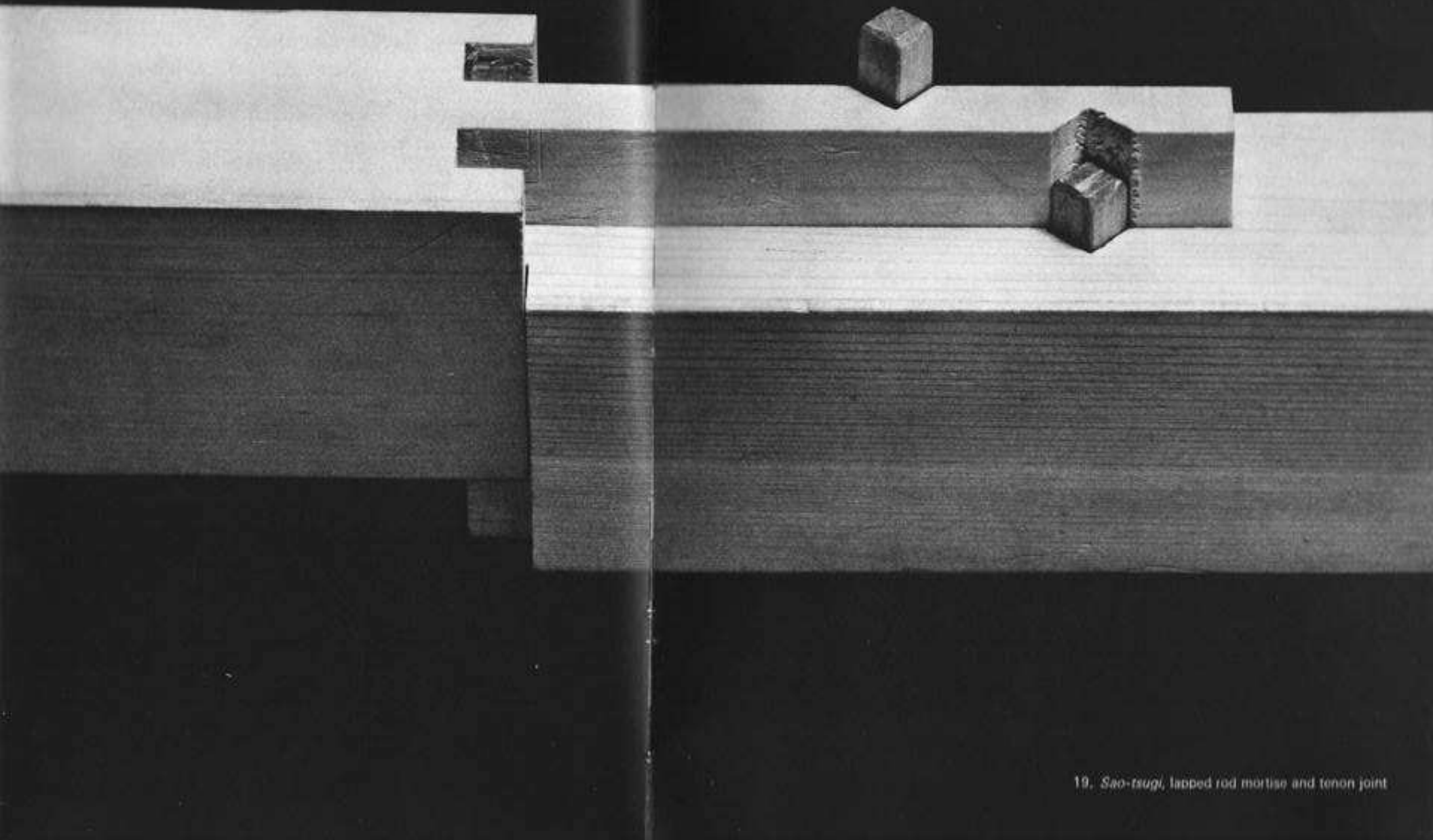
EMPALME DE MACHO Y HEMBRA O BOCA DE PEZ



EMPALME COMPUESTO

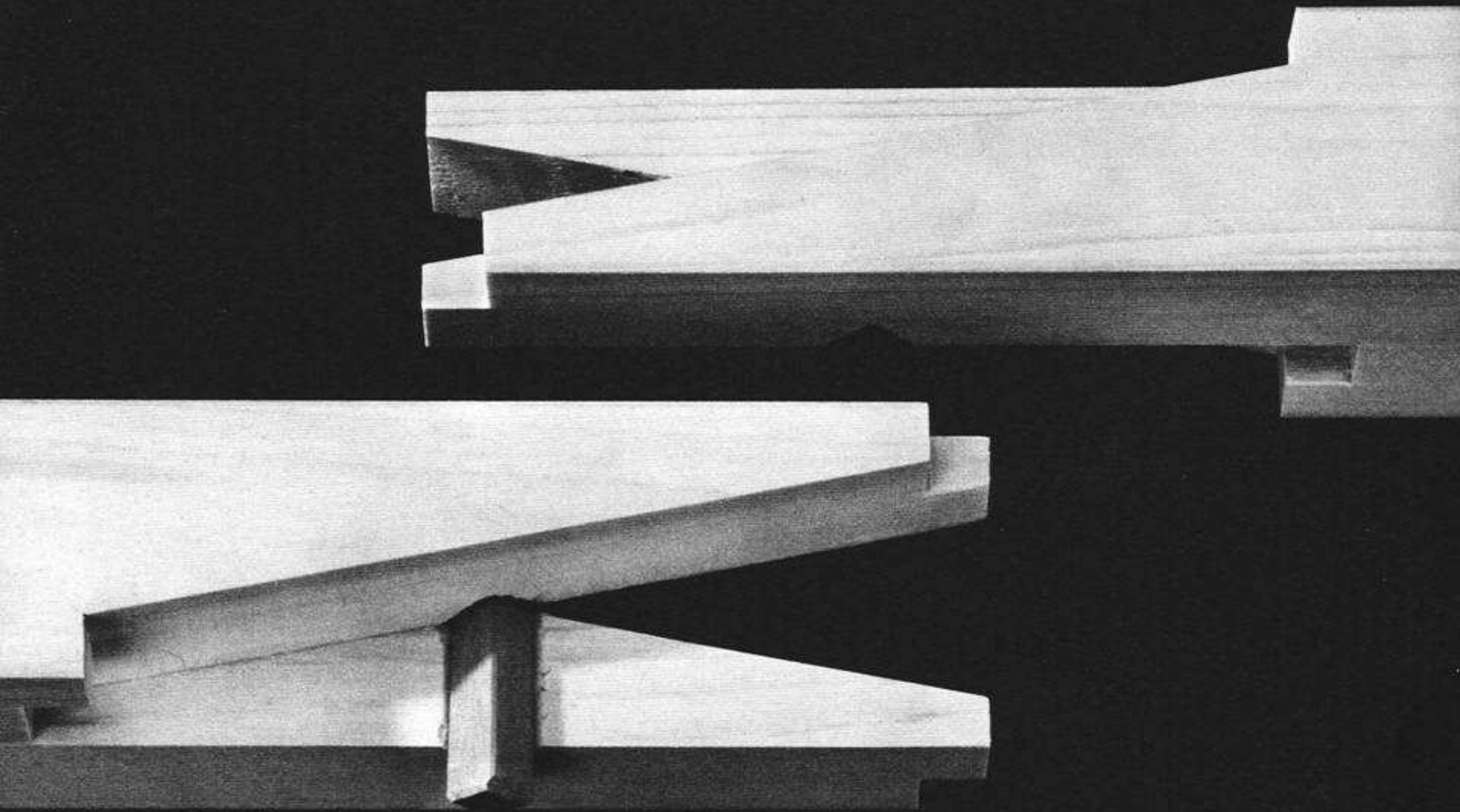


EMPALME COMPUESTO

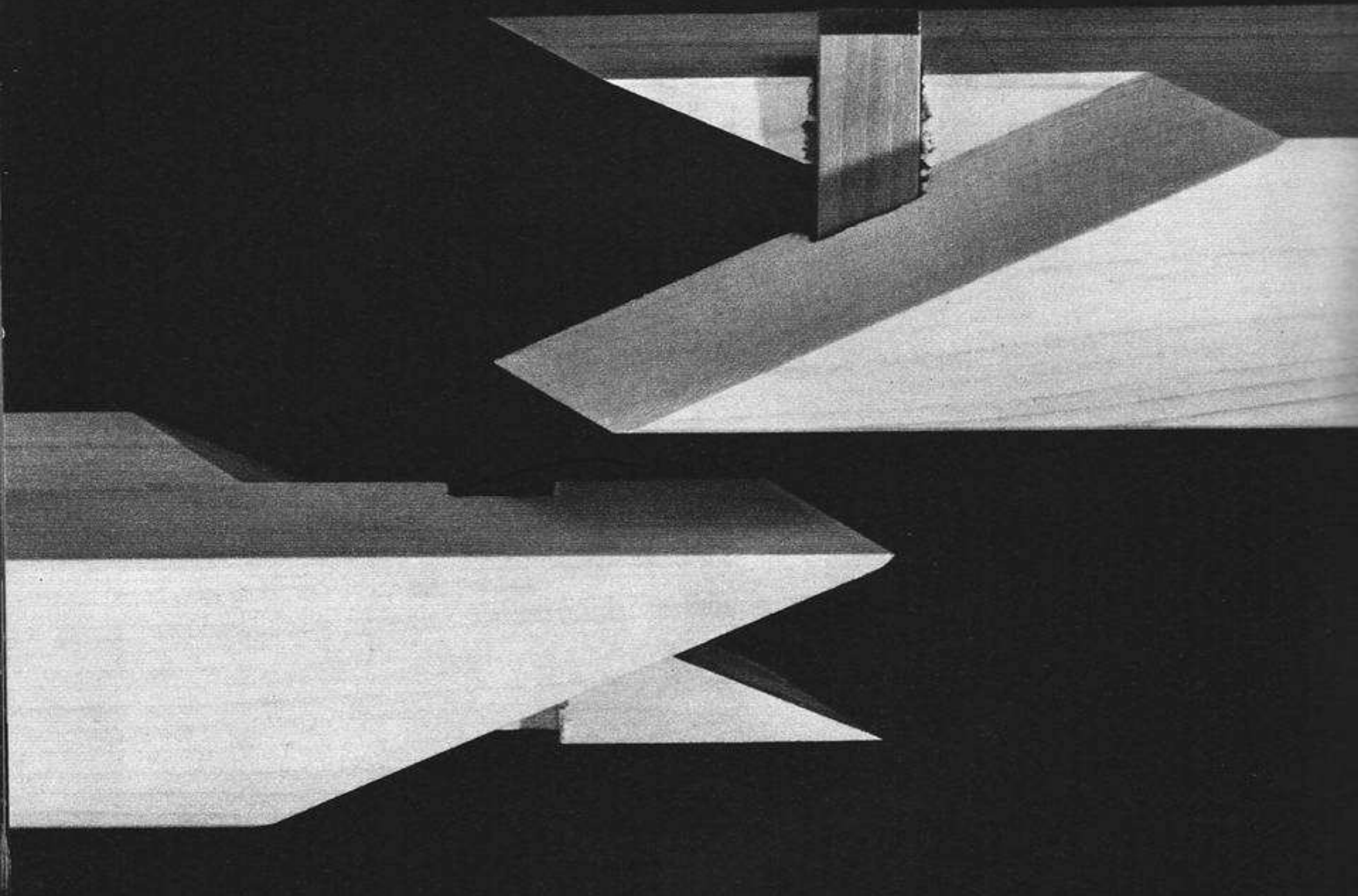


19. *Sao-tsugi*, lapped rod mortise and tenon joint

EMPALME COMPUESTO



EMPALME COMPUESTO



EMPALME COMPUESTO



EMPALME COMPUESTO



EMPALME COMPUESTO



EMPALME COMPUESTO



EMPALME COMPUESTO



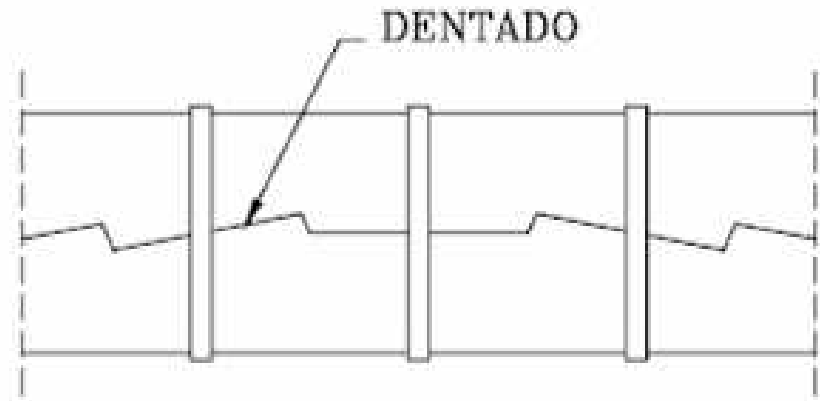
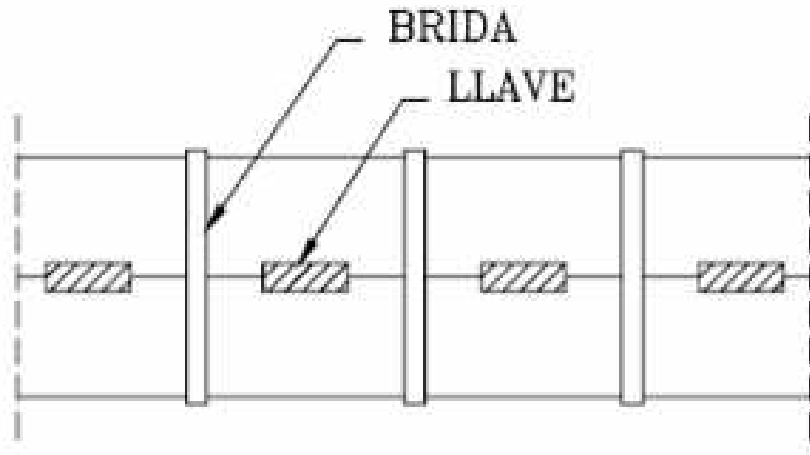
EMPALME COMPUESTO



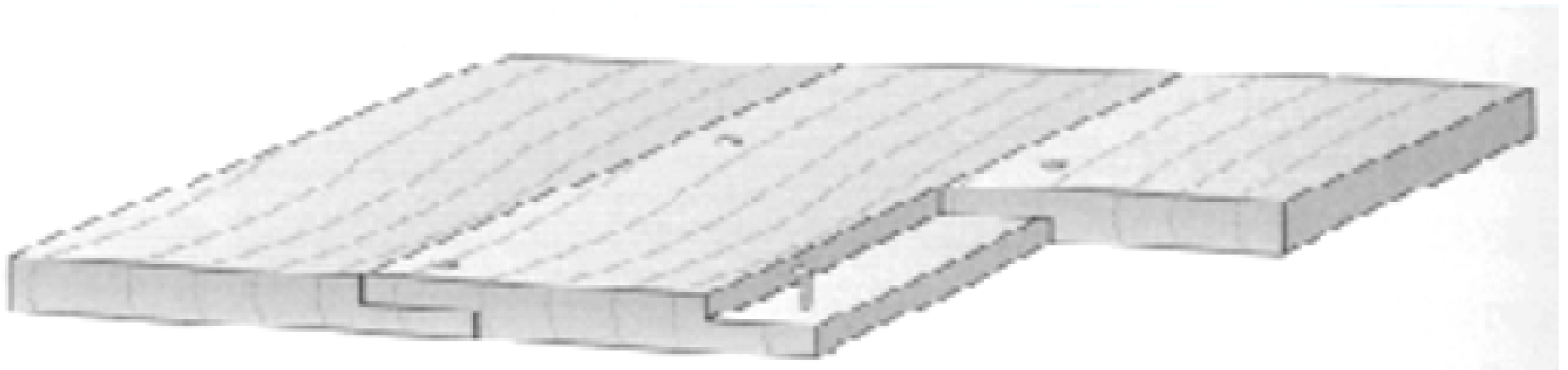
ACOPLAMIENTOS O JUNTAS

MACHIHEMBRO
PLANA GALCEADA
CON LENGÜETA
CON GALLETA
CON CLAVIJAS

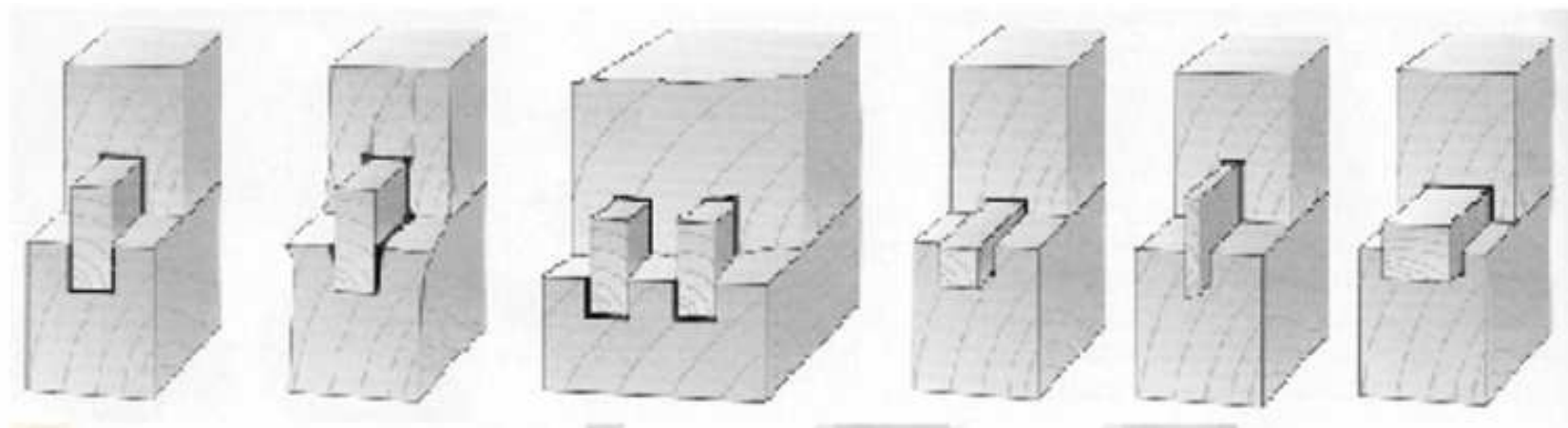
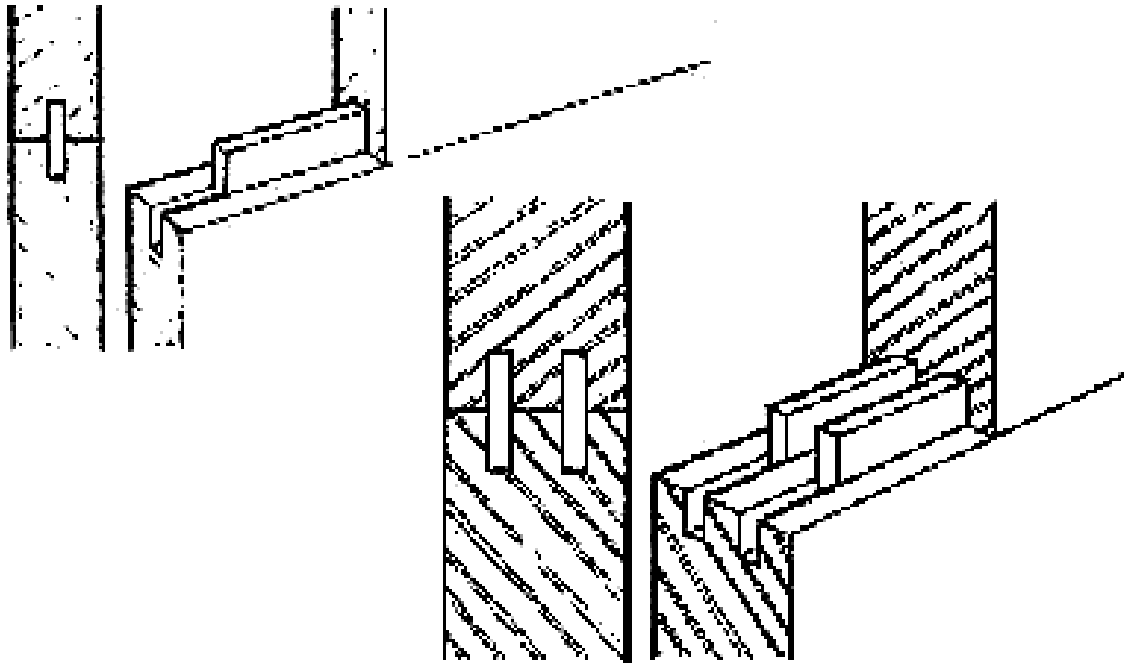
ACOPLAMIENTO CON BRIDA y LLAVE



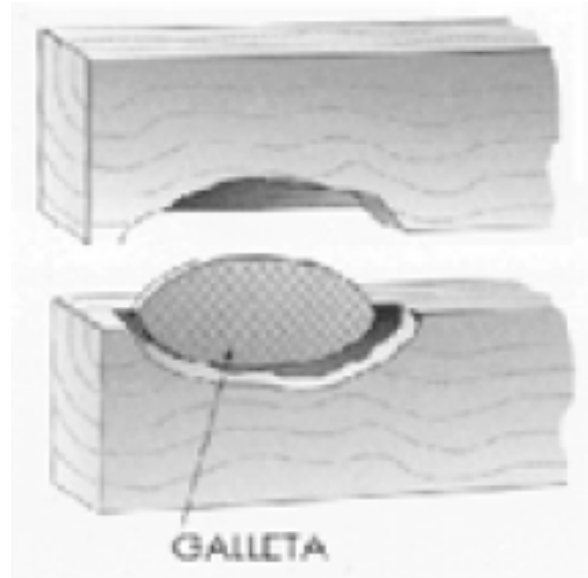
ACOPLAMIENTO GALCEADO



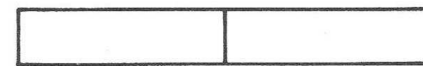
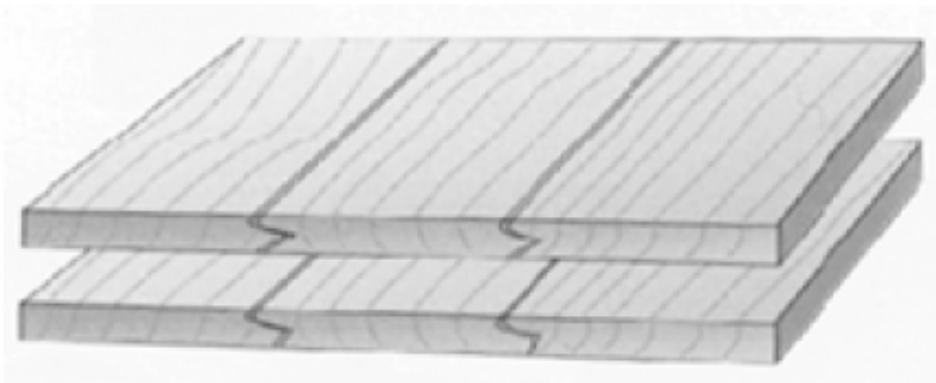
ACOPLAMIENTO CON LENGUETA



ACOPLAMIENTO CON GALLETA



ACOPLAMIENTO CON BISEL



Straight Joint



Scarf Joint

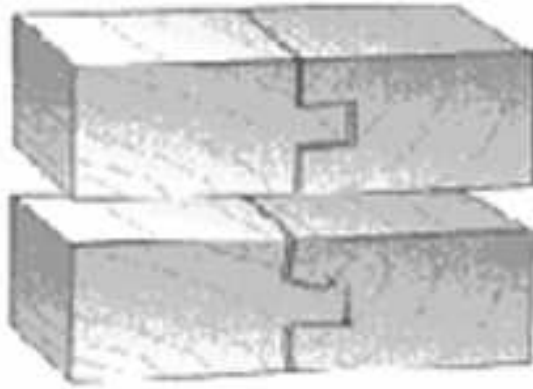


V-Groove or Bird's Mouth Joint



Shiplap Joint

ACOPLAMIENTO MACHIHEMBRADO

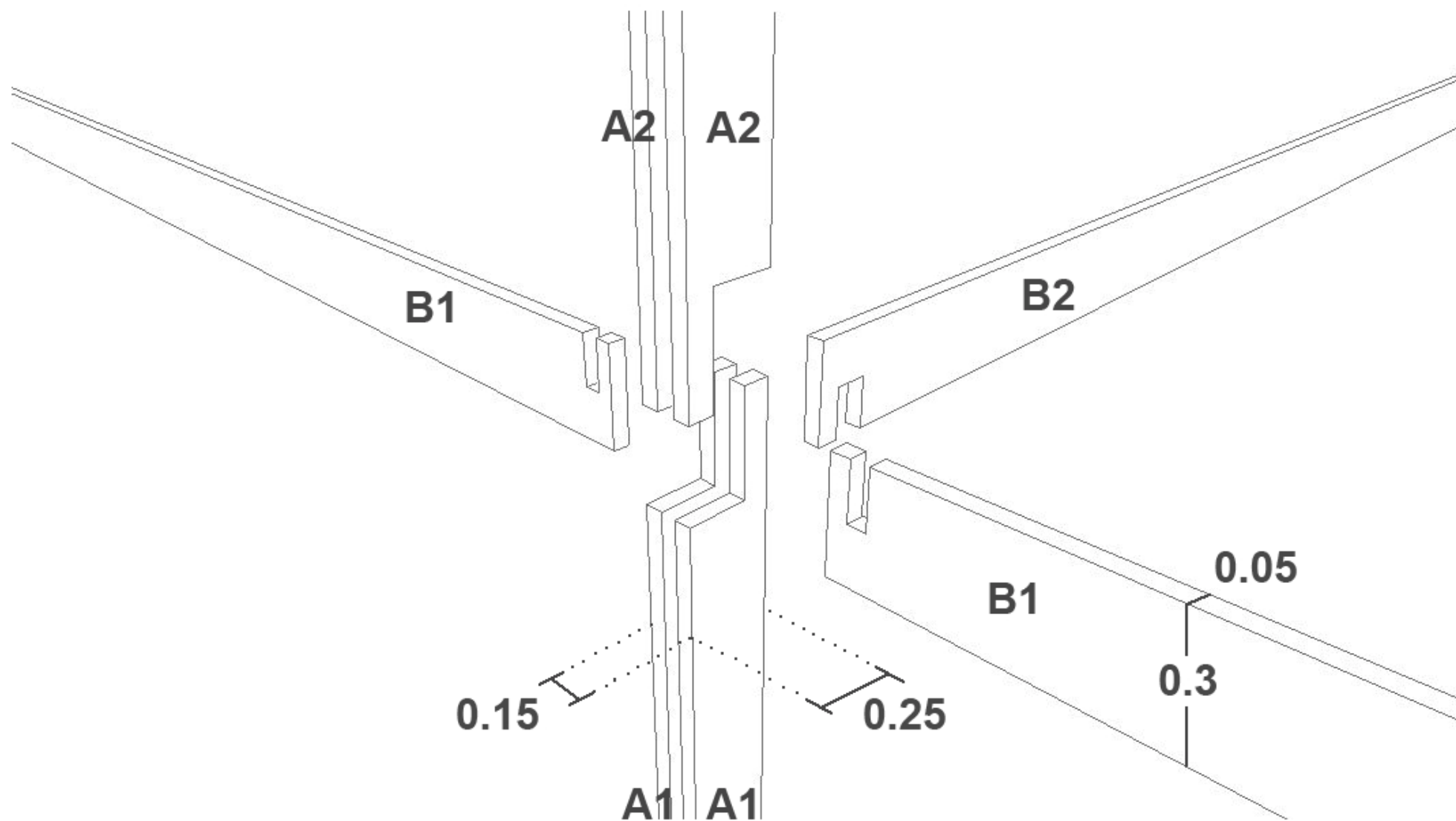


↑ *Machihembrado simple.*

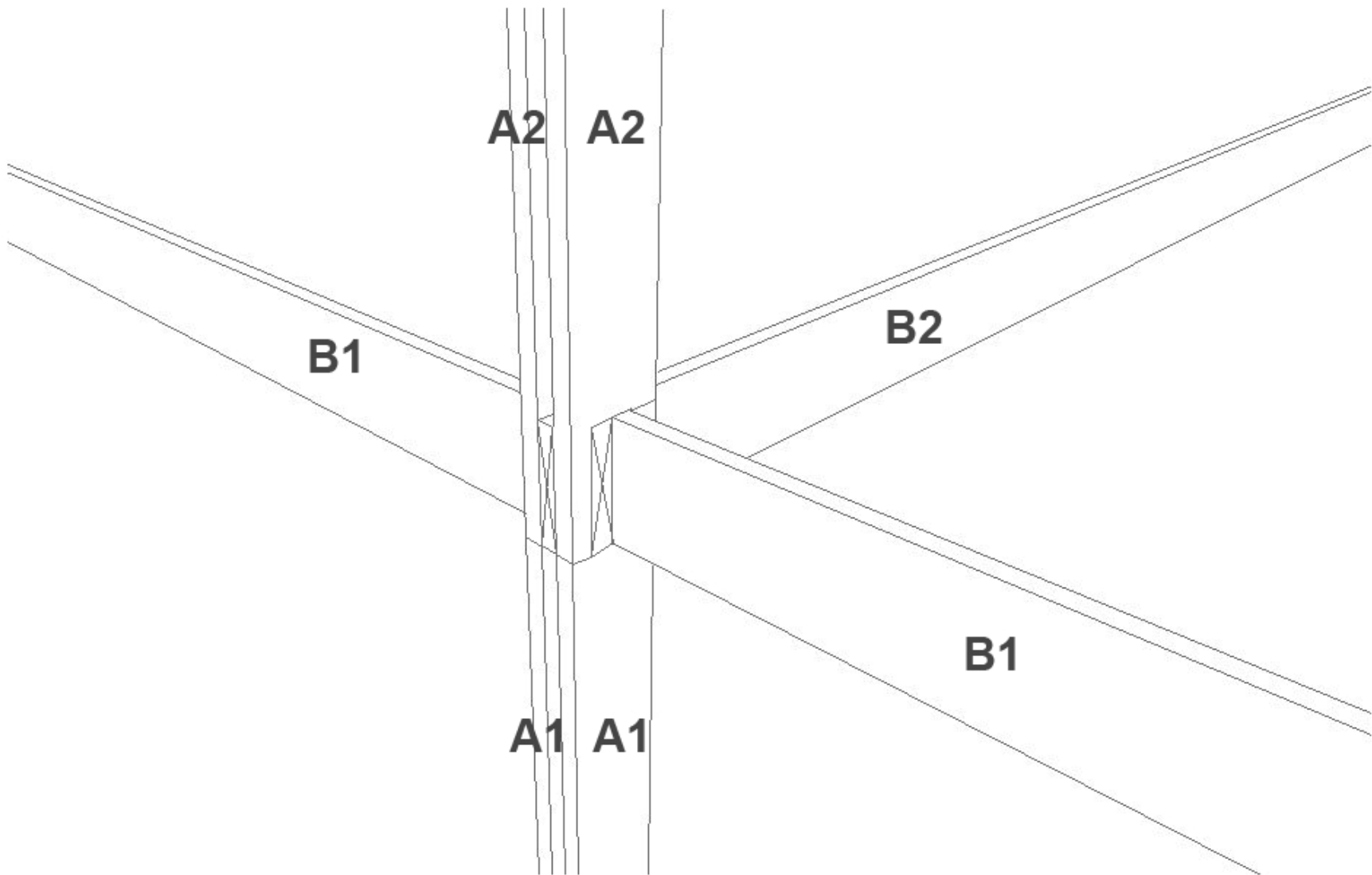


↑ *Machihembrado doble.*





- A1 Pilar Inferior
- A2 Pilar Superior
- B1 Viga Longitudinal
- B2 Viga Transversal



ENSAMBLES, EMPALMES y ACOPLAMIENTOS

